DOCUMENT RESUME

ED 118 860 CE 006 403

TITLE	Food Service Employee. [Teacher's Copy]. Revised.
INSTITUTION	Texas Education Agency, Austin. Dept. of Occupational Education and Technology.; Texas Tech Univ., Lubbock. Home Economics Instructional Materials Center.
PUB DATE	75
NOTE	432p.; For related documents, see CE 006 399-405
EDRS PRICE	MF-$0.83 HC-$23.43 Plus Postage
DESCRIPTORS	Adult Education; Cooperative Education; Course Content; *Curriculum Guides; Educational Objectives; *Food Service Occupations; *Food Service Workers; Health Personnel; Instructional Materials; Job Analysis; Learning Activities; *Occupational Home Economics; Occupational Information; Reading Assignments; Secondary Education; Tests; Unit Plan
IDENTIFIERS	*Dietetic Aides

ABSTRACT

The curriculum guide, one of a series prepared to assist teacher-coordinators in promoting and teaching home economics cooperative education programs, provides a course of study for the food service employee occupation. In addition to a brief overview, job description, and job analysis of the occupation, the guide's four main sections are: instructional materials for students, answer sheets for study questions, unit tests, and answer keys for unit tests. For each of these sections the guide covers the following 13 topics in a unit format: what is a food service employees, sanitation, safety, nutrition small equipment for food preparation and service, large equipment for food preparation and service, large equipment for cooking food, techniques of food preparation, cold food work station, hot food work station, bake work station, customer service techniques, and procedures for storeroom control. Each unit provides objectives, tasks, work experiences, and study assignments. (JR)

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ED118860

FOOD SERVICE EMPLOYEE

Materials Developed and Distributed by

Home Economics Instructional Materials Center
Texas Tech University
Box 4067
Lubbock, Texas 79409

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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CE006403

Directed by

Texas Tech University
College of Home Economics
Department of
Home Economics Education
Lubbock, Texas

In Cooperation with

Texas Education Agency
Department of Occupational
Education and Technology
Homemaking Education
Austin, Texas

First Printing
September, 1968

Revised 1969, 1975

DESCRIPTION OF
HOME ECONOMICS INSTRUCTIONAL MATERIALS CENTER

The Home Economics Instructional Materials Center was established September 1, 1967, as a continuing project. It is a cooperative project between Homemaking Education in the Texas Education Agency, and the College of Home Economics, Home Economics Education Department, Texas Tech University at Lubbock, Texas. The instructional materials developed at the Center assist teachers and coordinators in promoting and teaching home economics gainful employment programs and homemaking education.

To provide a background of information for the establishment of the Home Economics Instructional Materials Center, a Planning Grant Project was approved by the Texas Education Agency for February 1 through August 31, 1967. The major purposes of the Planning Grant Project were (1) to assemble and catalog an occupational reference library, (2) to develop procedural steps for preparation of instructional materials, and (3) to illustrate the first sequence of these steps, that is, to develop job analyses and to list competencies needed for employability.

The present major objectives of the Home Economics Instructional Materials Center are (1) to develop instructional materials for students enrolled in cooperative part-time training programs and pre-employment laboratory training programs, (2) to develop materials in homemaking education, and (3) to develop at a later time materials designed for use in home and community service programs.

Acknowledgement is given to the following persons:

Mrs. Elizabeth F. Smith, Director, Homemaking Education, Texas Education Agency, who conceived the original plan for establishing the Center and continues to determine ways in which the Center can meet the needs of homemaking education in Texas.

Dr. Camille G. Bell, Chairman, Department of Home Economics Education, who continues to serve in an advisory capacity.

Linda Glosson, Director
Betty Robinson, Associate Director
Vicki Reid, Assistant Director

ACKNOWLEDGEMENTS

The course of study for Food Service Employee, prepared by the Home Economics Instructional Materials Center at Texas Tech University, is the result of the combined efforts and ideas of many people, namely:

Mrs. Thelma Mayes, Amarillo, Texas, and Mrs. Minerva Ritchie, Brownsville, Texas, Home Economics Cooperative Education Teacher-Coordinators, who spent one month at the Center helping with the writing of the original Food Service Employee instructional materials.

Mrs. Ruth Franklin, Albuquerque, New Mexico, who served as subject matter specialist in commercial and institutional food service during the development of the original Food Service Employee.

Mrs. Zou Cherry, Houston, Texas, and Mrs. Marilyn Baker, Midland, Texas, Home Economics Cooperative Education Teacher-Coordinators, who spent one month at the center helping with the writing of the revised Food Service Employee instructional materials.

Mrs. Margarette Harden, Assistant Professor, Food and Nutrition, Texas Tech University, Lubbock, Texas, who served as subject matter specialist during the development of the revised Food Service Employee instructional materials.

Mr. Howard Welborn and Mrs. Virginia Thompson, Lubbock, Texas who drew illustrations for the instructional materials.

Miss Ann Sloan, University of Delaware, Newark, Delaware, who designed the cover of the course of study and drew some of the illustrations.

Mrs. Rella Peterson and Miss Annette Zellner, Graduate Research Assistants, Texas Tech University, Lubbock, Texas, who helped with the development of the instructional materials.

The advisory council for Food Service Employee which consisted of

Mr. Ron Vic, Assistant Manager, Kentucky Fried Chicken
Mrs. Roe Bauvasett, Consulting dietitian and Food Service Supervisor, University Convalescent Center
Mr. Dave Wallace and Mr. Ken Gray, Managers, McDonald's Restaurants
Mrs. Sarah Stalcup, Registered Dietitian, Furrs Quality Control Kitchen
Mrs. Agnes Hicks, Manager, Hemphill Wells Tea Room
Mr. Noah Cromer, Owner, El Soreno Restaurant
Mr. Tom Walker, General Manager, Pizza Hut
Mr. Joe Holmes, Manager, Central Food Facilities, Texas Tech University

all of Lubbock Texas, who aided in identification of tasks for the job analysis and content for the course outline.

COURSE OF STUDY
FOR
FOOD SERVICE EMPLOYEE

This course of study is one of a series available to assist teacher-coordinators in promoting and/or teaching home economics cooperative education programs. The following are other courses of study in the series:

- *Child Care Aide*
- *Clothing Assistant*
- *Dietetic Aide*
- *Home Furnishings Aide*
- *Housekeeping Management Assistant*

A course of study consists of (1) an overview and job description, (2) a job analysis, (3) a course outline, (4) instructional materials for student use, (5) unit tests, and (6) a list of references reuqired for use with the insturctional miterials.

Developmental Procedures

The course of study for *Food Service Employee* is based on the job analysis included in this set of materials. The job analysis was developed from interviews with employers and employees in food service operations. The proposed course outline for teacher use (which grew out of the job analysis) served as a guide for writing the instructional materials for student use. During the development of the course outline, advisory committee meetings were held to review and edit the working materials. Experienced home economics cooperative education teacher-coordinators and subject-matter specialists aided in writing the student materials.

The job analysis may be used for interviews with employers and employees to survey the tasks performed by entry-level employees in food service in the local community. Results of the interviews can then be used as a basis for writing the training plans for each student.

The proposed course outline relates the tasks to the general objectives and competencies needed by students to perform effectively on the job. The competencies listed as "work experiences" are to be gained primarily from on-the-job training, while those listed as "study assignments" are to be gained from classroom experiences.

Student Edition

The student instructional materials in the course of study are designed to provide *part* of the classroom instruction and are designed to give students an increased understanding of the tasks they will perform on the job. This section is also bound separately for student use.

Since students in any one class may be employed in a variety of occupations, the instructional materials have been developed to be used for individual study with a minimum of assistance from the teacher-coordinator. The materials are designed so that students may begin with any unit and proceed through them in any order. Beginning with the units most closely related to their jobs and then going back and studying the rest of the information will aid students in seeing the relevance of the instructional materials to their specific jobs.

Each topic in the instructional materials begins with the task to which the topic is related and a statement of behavioral objectives. For some topics, information sheets are provided, and for other topics, reading assignments in related texts and pamphlets are made. Study questions, assignments, and suggestions for group work follow the information sheet for each topic. The study questions provide an opportunity for the student to check his understanding of the information presented. The teacher-coordinator may wish to check the answers to the questions, or she may suggest that the student check his own work and then turn the work in to her. Group work is suggested to provide opportunities for students to work together on specific projects and problems.

Teacher's Edition

Answers to study questions, unit tests, and answer keys are included in the teacher's edition of the course of study, but they are not in the separately bound student copy of instructional materials.

Reference materials essential for use with the course of study are listed on page 483. These books and pamphlets must be secured and made available for student use. An effort has been made to select references which will adequately cover the materials and provide up-to-date information related to the job.

A more comprehensive reference list is included in the Guidebook for HECE Occupational Areas. Additional references should be selected from this list to enrich the instructional materials, to provide specialized information for specific types of jobs, and to meet the needs of advanced and second-year students. Learning to use a variety of references will aid the student in becoming a more knowledgeable and flexible employee.

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OVERVIEW

FOOD SERVICE EMPLOYEE

A trainee in food service is expected to develop skills in jobs associated with the kitchen, dishroom, or serving area. His responsibilities are defined by the type and size of the food service operation with which he is employed.

The home economics cooperative education student may be employed in the food service operation of a restaurant, cafeteria, fast-food operation, specialty house, hospital, nursing home, or an industrial or educational facility. He should become versatile in the performance of a variety of food service tasks. Upon completion of his training, he should be qualified for employment in a variety of types of food service operations.

The major functional activities in a food service business are: managing, supervising, purchasing, planning, receiving, inspecting, storing, producing, serving, dishwashing, maintaining cleanliness, and keeping records.

The following chart shows a distribution of the kinds of jobs usually associated with a food service business. The positions and job tasks are assigned according to need and, in some cases, one person will assume the responsibilities of several job tasks.

SAMPLE ORGANIZATIONAL CHART

Manager

Assistants or Department Heads

Food Production	Comptroller	Sanitation & Maintenance		Service
Cook*	Bookkeeper**	Engineer		Host/Hostess
Cook's Helper	Cashier	Sanitation	Maintenance	Waiter/Waitress
	Purchasing Agent**	Dishwasher		Busboy/Busgirl
	Storeroom Clerk	Potwasher		
		Pantry Girl		(Cafeteria)
				Dining Room Attendants
				Line Server

* May be classified according to type of food or method of preparation as fry cook, pastry cook

** These duties are often assumed by management

Instructional materials for food service employees are structured to prepare youth for employment in any food service business. All trainees are expected to fulfill certain competencies, such as the ability to read, write, and work relatively simple mathematical problems. Positive personal-social traits, which lead to successful performance of the responsibilities related to the position, are advantageous to the trainee.

Qualities leading to advancement are neatness, good health, a command of the English language, tactfulness, good judgment, pleasing personality, adaptability, and an ability to memorize quickly. Specific competencies related to the food service business are knowledge and ability in handling foods and ability to use and care for equipment, appliances, and utensils that are necessary in the preparation and serving of foods.

A food service employee has numerous demands as he performs his duties. The preparing and serving of food must be regulated so that each course immediately follows the one preceding it. The trainee, therefore, needs to know how long it takes to complete any course on the menu, and he must be able to plan intelligently for the preparation and service of several different meals simultaneously. He must understand and use the proper techniques for all occasions and, through employee meetings and training, become aware of common practices and customs as they relate to his job. He may be required to work at a rapid pace for short periods of time, while paying attention to numerous details.

The food service industry needs trained personnel and offers many possibilities for employment and advancement, thus the development of home economics cooperative education programs are justified. An unskilled person who begins at the job entry level as busboy and kitchen helper can advance as quickly as he is able to learn the assigned tasks. Knowing how each position fits into the total objectives of the business provides an excellent basis for the development of the trainee.

The jobs associated with the food industry have been analyzed for this course of study through research and interviews with food service operators of severaal kinds of businesses. The following tentative job analyses are the result of those interviews.

BUS BOY OR GIRL

At the entry level, the food service employee who works primarily between the serving area and the dishwashing section of the kitchen will remove dishes, silverware, glasses, and linens from the tables; place removed items systematically on trays or carts; transfer the loaded trays or carts to the kitchen or dishroom; deposit the items in specified containers or areas; clean the surfaces of the tables and chairs; and maintain a supply of linens, table settings, and other necessary items convenient to the serving area.

General housekeeping duties include daily mopping or vacuuming of floors; thorough cleaning of the surfaces of the tables, chairs, and serving stations; and replacement of all the equipment and supplies that are required for the assigned area. Any spilled food or liquids must be wiped up promptly.

The entry level employee may be expected to assist the waiter by resetting the tables with silverware, glasses, linens, and filled condiment containers; carrying heavy trays of food; and serving extra items to the customers as requested. Other duties may include making the coffee and iced tea, filling the beverage boxes, checking out needed supplies from the storeroom, filling condiment and ice containers, and arranging tables for special groups.

The overall responsibility of the beginning food service employee is to maintain orderliness and cleanliness in the serving area. Bus service is an important job because cleanliness is essential to the successful operation of any food service establishment.

SERVICE HOST OR HOSTESS

The service host or hostess (waiter or waitress) works primarily in the serving area of the food business. He or she takes orders for food, places orders for each course in proper sequence in the kitchen, carries the food from the kitchen to the tables, serves the food using prescribed techniques, itemizes and totals checks for all the foods ordered, and presents the checks to the customers.

He is expected to make his customers feel welcome and comfortable, to maintain an awareness of the needs of the customers, to fulfill promptly any reasonable requests made, and to maintain the neatness of the table at all times during the serving period. He may be expected to present the menu and offer suggestions upon request.

Other duties may include preparing menu folders, arranging tables for special groups, making beverages, assembling orders, filling condiment containers, receiving payment from the customer to take to the cashier, and returning any change that may be due the customer.

Housekeeping duties may include clearing the tables and disposing of the used items in proper locations and containers, cleaning off the tables and chairs, and attending to the general overall appearance of the assigned area.

The most essential responsibilities are to serve customers efficiently and safely. If the service host accepts his responsibilites and performs them in a courteous and friendly manner, he will promote the successful operation of the food service business where he is employed.

KITCHEN HELPERS

Other entry level jobs in a food service operation may involve working as a cook's helper, kitchen helper, dishwasher, or potwasher depending upon the type and size of the operation.

As a cook's helper, the tasks may include washing, peeling, and chopping fruits and vegetables; watching and stirring foods to prevent burning while cooking; weighing or measuring staple items for the cook; preparing beverages; adding finishing touches to prepared foods; assisting in assembling orders placed by the watier or waitress; and verifying the orders after they have been assembled. He may devote his entire time to one type of food preparation or work in a variety of preparation centers as needed.

If the main job is concerned with sanitation and maintenance, then the tasks include keeping the kitchen and equipment clean. He is expected to properly clean and sanitize work tables, butcher blocks, pots, pans, steam tables, and steam table trays and to sweep and mop the floors. A knowledge of the care of equipment is essential for this job.

Other tasks may include washing and polishing silverware; washing glasses and dishes; carrying trays of food or materials to specified locations; removing and replacing equipment and supplies as needed in assigned areas; checking out needed supplies from the storeroom; and filling staple containers.

The employee's responsibilities are to perform the simpler tasks that are essential in the preparation of foods and to maintain sanitary and orderly conditions for equipment and surroundings.

COOK

The cook's main duties involve the preparation of foods; however, his tasks depend upon the type and size of the food operation with which he is employed. The variety of tasks are designated by (1) the kinds of foods being prepared, (2) the methods of preparation, (3) the cook's rank in the kitchen, or (4) the meal being prepared.

In small establishments, the cook's job includes less specialization and a greater variety of tasks. He either prepares or supervises the preparation of all items on the day's menu for serving at prescribed times of the day.

If the cook is employed in a large food service establishment, his job tasks may be limited to the preparation of specific kinds of food, such as vegetables, fish, or desserts. In another situation, his tasks may be determined by the method of preparation, such as broiling, baking, or frying.

Some employers hire a cook for a particular meal and limit his tasks to the preparation of specific foods identified with that meal. Other employers may determine the job tasks according to the rank of the employee, such as first or second cook. Each type of cook will have designated tasks as defined by the need and policy of the food service business.

The general responsibilities of each cook include preparing foods for serving in ways that are attractive, nutritious, and safe, following sanitary and efficient techniques.

SUMMARY

A student participating in a food service training program should be prepared to assume a variety of tasks. His progress is influenced primarily by his interests, abilities, and training since the food industry offers numerous possibilities for employment and advancement.

FOOD SERVICE EMPLOYEE JOB ANALYSIS

(Used in interviews with food service managers)

Name of Business______________________________ Date____________________________________

Person Interviewed____________________________ Interviewer______________________________

DIRECTIONS: Please check in appropriate column the responsibilities you expect a student to assume when working as a food service employee. In the proposed schedule column, indicate when during the school year you plan for the student to take up each task or group of tasks. This information will aid the teacher-coordinator in developing an individualized training plan for the student.

A food service employee assumes numerous responsibilities in preparing and serving food in such situations as restaurants, cafes, tearooms, cafeterias, franchise food establishments, hospitals, nursing homes, school cafeterias, children's homes, utility companies, private homes with supervision and other food service facilities. Working under the direction of a qualified food service worker, the student performs the following functions:

	DAILY	OCCASIONALLY	DOES NOT APPLY	PROPOSED SCHEDULE
1. Accept instruction and guidance from supervisory personnel in performing duties assigned to a food service employee.				
2. Handle food, beverages, equipment, utensils, and table settings in ways to prevent contamination.				
3. Follow federal, state, and local sanitation codes.				
4. Wash and inspect glassware, flatware and tableware for cleanliness and spotlessness.				
5. Wash utensils and cooking equipment.				

	DAILY	OCCASION-ALLY	DOES NOT APPLY	PROPOSED SCHEDULE
6. Handle equipment and utensils in ways to prevent contamination.				
7. Clean and sanitize furniture, floors, and other surfaces in the kitchen and in the serving area.				
8. Use precautions necessary to avoid accidents in food preparation area.				
9. Follow appropriate emergency procedures.				
10. Use nutrition information in planning, preparing and serving meals for persons of various ages.				
11. Select proper hand utensil for specific food preparation tasks.				
12. Measure and weigh foods according to specifications listed in standard recipes.				
13. Select and correctly use proper piece of equipment for a specified job in food preparation and service.				
14. Select and correctly use proper piece of equipment for cooking food.				
15. Read recipes, know terminology, and follow directions.				
16. Assemble food orders and place them on plates and trays.				
17. Verify orders by scanning filled plates to insure specified portion and quality of food.				

	DAILY	OCCASION-ALLY	DOES NOT APPLY	PROPOSED SCHEDULE
18. Plan work schedule so foods are ready at serving time.				
19. Make beverages, such as coffee and tea, and place them in serving locations.				
20. Follow standard procedures for preparing a variety of foods.				
21. Evaluate quality of food prepared.				
22. Set assigned tables at the beginning of the work day and maintain tables during service hours.				
23. Help arrange tables for large groups and banquets.				
24. Welcome customers in an appropriate manner.				
25. Fill water glasses and distribute menus.				
26. Offer suggestions or answer questions about the menu.				
27. Write orders following prescribed methods.				
28. Place orders in kitchen.				
29. Prepare menu folders.				
30. Serve food to customer.				
31. Check the needs of the customers periodically and supply them with needed items.				

	DAILY	OCCASION-ALLY	DOES NOT APPLY	PROPOSED SCHEDULE
32. Clear items from tables as the customer is finished with them.				
33. Replenish serving station during serving hours.				
34. Fill condiment containers, arrange dishes and silverware in appropriate places.				
35. Remove soiled items from tables and stations.				
36. Carry loaded trays between kitchen and serving areas.				
37. Sort, count, and store utensils at designated places.				
38. Itemize and total the price of each order.				
39. Present check to customers.				
40. Make change.				
41. Do side work and perform closing duties.				
42. Follow standard procedures for receiving food and supplies.				
43. Requisition or issue food and supplies.				
44. Store food and supplies in appropriate facilities and at proper temperature.				
45. Assist with inventories of food and supplies.				

COURSE UNIT I

WHAT IS A FOOD SERVICE EMPLOYEE?

OBJECTIVES: List the tasks and competencies of a food service employee.

Identify opportunities for advancement in food service.

Apply policies and rules of conduct to a particular job.

Analyze yourself in terms of desirable personal characteristics needed by a food service employee.

Summarize the relationship between job success and interpersonal relationships.

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
1. Accept instruction and guidance from supervisory personnel in performing duties assigned to a food service employee.	Relate job responsibilities to personal qualities and to the type of food service establishment.	Job opportunities in the food service industry Tasks assumed by food service employees Attitudes which lead to good interpersonal relationships (employee-employer, employee-employee) Personal qualities and characteristics needed by a successful food service employee Business policies related to food service employees

COURSE UNIT II

SANITATION

OBJECTIVES:

Identify ways disease may be spread through careless handling of food and equipment.

Summarize the principles of sanitation which apply to the food service industry.

Recognize the necessity of appropriate housekeeping and maintenance practices.

Evaluate personal practices in relation to principles of sanitation.

Discriminate between cleaning and sanitizing and know when to use each

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
2. Handle food, beverages, equipment, utensils, and table settings in ways to prevent contamination.	Use judgment in handling food, equipment, and supplies in a sanitary manner.	Types of food-borne illnesses Ways disease and food-borne illnesses may be spread through careless handling of contaminated utensils, equipment, and food Procedures to follow to prevent food-borne illnesses Necessity for the evaluation of personal habits related to cleanliness and sanitation Handling equipment and utensils Cleaning vs. sanitizing Pest control

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
3. Follow federal, state, and local sanitation codes.	Observe sanitation codes.	Federal and state sanitary requirements for food service operation
4. Wash and inspect glassware, flatware, and tableware for cleanliness and spotlessness.	Wash dishes and utensils using efficient, sanitary techniques, and appropriate materials and equipment.	Appropriate procedures for dishwashing
5. Wash utensils and cooking equipment.		Proper use and care of dishwashing equipment
6. Clean and sanitize furniture, floors, and other surfaces in the kitchen and in the serving area.	Perform housekeeping tasks assigned in an efficient and sanitary manner	Importance of maintaining all surfaces in a sanitary manner
		Procedures for cleaning and sanitizing surfaces and equipment
	Select the correct materials for cleaning tables and chairs.	Procedures for cleaning tables and chairs
	Care for type of floor finish at place of employment.	Methods to use for cleaning a variety of types of floor finishes and coverings
		Procedure to follow for mopping floors

COURSE UNIT III

SAFETY

OBJECTIVES: Recognize the principles of safety which relate to the handling and sorting of food, equipment, and utensils.

Evaluate self in terms of safety practices followed on the job.

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
7. Use precautions necessary to avoid accidents in food preparation area.	Recognize hazards that may cause accidents.	Conditions which may lead to accidents
	Apply safety precautions to prevent accidents.	Necessity of being alert to hazardous situations
		Precautions to follow in the food preparation area
		Appropriate methods to use for lifting and carrying objects
8. Follow appropriate emergency procedures.	Apply first aid to minor injuries.	First aid for minor injuries
	Use different kinds of fire extinguishers.	Types of fire extinguishers to use for different types of fires

UNIT IV

NUTRITION

OBJECTIVES: Relate nutritional information to various food service situations.

Describe influences on nutrition and eating habits.

Summarize the food value of specific foods.

Plan nutritious menus for specific situations.

Make simple diet modifications.

TASK	WORK EXPERIENCES	STUDY ASSIGNMENTS
9. Use nutrition information in planning, preparing, and serving meals for persons of various ages.	Recognize factors which influence eating habits.	Food habits and customs Food fads and fallacies
	Use the Basic Four food groups in guiding food selection.	Basic Four food groups
	Answer questions about the nutritional value of foods served.	Nutrients needed by the body
	Recognize nutritional needs of persons of various ages.	Nutritional needs at various ages
	Assist in planning nutritious menus.	Factors to consider in menu planning
	Make or follow simple diet modifications.	Common diet modifications

COURSE UNIT V

SMALL EQUIPMENT FOR FOOD PREPARATION AND SERVICE

OBJECTIVES: Select the appropriate piece of equipment for a particular task.

Describe safety measures to observe when using knives.

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
10. Select proper hand utensil for specific food preparation tasks.	Select and use appropriate utensils for food preparation.	The appropriate utensil to select for a particular task
11. Measure and weigh foods according to specifications listed in standard recipes.	Use standard weights and measures in preparing foods.	Procedures to follow when measuring and weighing foods Functions of scales and balances and their use and care

COURSE UNIT VI

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

OBJECTIVES: Recognize the kinds and functions of equipment used in commercial food service establishments.

Outline correct procedures for use of commercial kitchen equipment.

Select the appropriate piece of equipment for a particular task.

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
12. Select and correctly use proper piece of equipment for a specified job in food preparation and service.	Use food service equipment correctly.	Procedures for using commercial kitchen equipment Factors related to the care of commercial kitchen equipment Appropriate methods of handling equipment to avoid injury and damage

COURSE UNIT VII

LARGE EQUIPMENT FOR COOKING FOOD

OBJECTIVES: Recognize the kinds and functions of equipment used in commercial food service establishments.

Outline correct procedures for use of commercial kitchen equipment.

Select the appropriate piece of equipment for a particular task.

TASK	WORK EXPERIENCES	STUDY ASSIGNMENTS
13. Select and correctly use proper piece of equipment for cooking food.	Use food service equipment correctly.	Procedures for using commercial kitchen equipment Factors related to the care of commercial kitchen equipment Appropriate methods of handling equipment to avoid injury and damage

COURSE UNIT VIII

TECHNIQUES OF FOOD PREPARATION

OBJECTIVES: Interpret terms, abbreviations, equivalents, and substitutions used in recipes.

Plan work so as to meet scheduled deadlines.

Adapt techniques of work simplification to tasks performed on the job.

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
14. Read recipes, know terminology, and follow directions.	Follow standard recipes accurately.	Importance of following standard procedures when using a recipe Characteristics of standard recipe Terminology, abbreviations, substitutions, and equivalents used in recipes
	Prepare convenience foods following directions.	Importance of following directions when preparing convenience foods Processes used to preserve convenience foods
15. Assemble food orders and place them on plates and trays.	Portion foods accurately and arrange attractively on plate.	Reasons for portioning foods Methods used to portion foods
16. Verify orders by scanning filled plates to insure specified portion and quality of food.	Check food orders quickly for accuracy and quality.	Necessity for accurate portions to insure customer satisfaction

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
17. Plan work schedule so foods are ready at serving time.	Schedule work so foods are prepared by serving time.	Purpose of work simplification Work simplification techniques Principles of motion economy which affect job performance

COURSE UNIT IX

COLD FOOD WORK STATION

OBJECTIVES: Describe procedures to be used in the preparation of quality cold foods.

Identify standards for quality cold food products.

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
18. Make beverages, such as coffee and tea, and place them in serving locations.	Prepare beverages of high quality consistently.	Standard procedures for preparing beverages
19. Follow standard procedures for preparing a variety of foods.	Prepare cold foods following standardized procedures and recipes.	Ingredients used in various cold foods Various processes of food preparation: Salads Sandwiches
	Assemble ingredients and equipment for various processes of food preparation.	Correct temperature for preparing cold foods Care and storage of various cold foods
20. Evaluate quality of food prepared.	Judge quality of a variety of foods by sight, odor, and taste.	Quality standards for raw and prepared foods Necessity for consistency in preparation of high quality cold food products Ways to serve various cold foods Garnishes and garnishing

COURSE UNIT X

HOT FOOD WORK STATION

OBJECTIVES: Describe procedures to be used in the preparation of quality hot foods.

Identify standards for quality hot food products.

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
19. Follow standard procedures for preparing a variety of foods.	Prepare hot foods following standardized procedures and recipes.	Ingredients used in various hot foods Various processes of food preparation: Eggs Soups Sauces Vegetables Cereals Pastas Meat, Poultry, Seafood
	Assemble ingredients and equipment for various processes of food preparation.	Correct temperatures for preparing hot foods Care and storage of various hot foods
20. Evaluate quality of food prepared.	Judge quality of a variety of foods by sight, odor, and taste.	Quality standards for hot foods Necessity for consistency in preparation of high quality hot food products Ways to serve various hot foods

COURSE UNIT XI

BAKE WORK STATION

OBJECTIVES: Describe procedures to be used in the preparation of quality baked foods.

Identify standards for quality baked food products.

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
19. Follow standard procedures for preparing a variety of foods.	Prepare baked foods following standardized procedures and recipes.	Ingredients used in various baked foods
		Various procedures of food preparation: Desserts Pastries Cakes Quick Breads Cookies Yeast Breads
		Correct temperatures for preparing baked foods
		Care and storage of various baked foods
20. Evaluate quality of food prepared.	Judge quality of a variety of foods by sight, odor, and taste.	Quality standards for baked foods
		Necessity for consistency in preparation of high quality of baked products
		Ways to serve various baked foods

COURSE UNIT XII

CUSTOMER SERVICE TECHNIQUES

OBJECTIVES:

Define the various types of service used in the food service industry.

Describe procedures for setting the table for the different types of service.

Practice techniques which make the customer feel welcome and comfortable.

Analyze techniques used in taking orders, serving foods, and clearing tables.

Recognize the necessity for alertness to customer needs.

Recognize the contribution bus service makes to the operation of the food service establishment.

Identify tasks involved in bus service.

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
21. Serve food in manner prescribed at place of employment.	Serve food properly according to type of service used.	American, French, Russian, and and buffet types of service
22. Set assigned tables at the beginning of the work day and maintain tables during service hours.	Set tables in manner prescribed by employer.	Terms related to table settings Methods of setting tables
23. Help arrange tables for large groups and banquets.	Set up rooms for special functions. Arrange tables in an efficient manner.	Factors to consider in determining room arrangements. Possible table arrangement for large groups and banquets

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
24. Welcome customers in an appropriate manner.	Make customers feel welcome in a friendly, pleasant manner.	Importance of first impressions in the food service industry
	Maintain an appropriate appearance.	Appropriate appearance for service host or hostess
	Relate to customers in a friendly, pleasant manner.	Personality traits which contribute to success as a service host or hostess
		Techniques to use when seating guests
25. Fill water glasses and distribute menus.	Greet customer and take order accurately.	Procedure to follow when greeting customer
		Techniques to use when serving children and handicapped guests
26. Offer suggestions or answer questions about the menu.	Explain terms on menu.	Terms used on menus
27. Write orders following prescribed methods.	Follow directions for writing orders.	Methods for writing and placing orders
	Take telephone orders.	Telephone etiquette
28. Place orders in kitchen.	Place order in kitchen for efficient service.	Necessity for taking orders accurately
29. Prepare menu folders.	Type menu folders.	Importance of following directions when typing menu folders
30. Serve food to customer.	Serve food according to method used at place of employment.	Techniques used in the serving of food at tables, booths, and counters
		Techniques of fountain service

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
		Order in which service is performed for different meals
		Use of a tray for serving food
		Responsibilities involved in cafeteria service
		Ways to display foods in an attractive manner
		Importance of keeping serving area clean
		Responsibilities involved in fast food service
31. Check the needs of the customers periodically and supply them with needed items.	Remain alert to customers' needs.	Importance of being alert to customers' needs as a contributing factor in the success of a business
32. Clear items from tables as the customer is finished with them.	Remove dishes and food from table in prescribed manner.	Procedure to follow when removing food and dishes from table
33. Replenish serving station during serving hours.	Handle china, glassware, silverware, utensils, ice, and condiments in a safe, efficient, and orderly manner.	Tasks involved in bus service
		Importance of bus service to overall food service operation
34. Fill condiment containers, arrange dishes and silverware in appropriate places.	Organize supplies and materials for efficient, sanitary use.	Ways to organize equipment and supplies used in bus service

	TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
35.	Remove soiled items from tables and stations.	Remove items from tables and serving station efficiently and quietly.	Importance of quiet and efficient methods in the performance of busing tasks
36.	Carry loaded trays between kitchen and serving areas.	Load and carry or push trays and carts properly.	Efficient methods of loading and carrying or pushing trays and carts
37.	Sort, count, and store utensils at designated places.	Replenish utensils as directed.	Procedures for sorting and counting silverware
38.	Itemize and total the price of each order.	Total checks accurately and quickly.	Procedures for filling out checks
39.	Present check to customers.	Present check to customer in an acceptable manner.	Manner in which checks should be presented to customer
40.	Make change.	Count change.	Procedures for counting change
41.	Do side work and perform closing duties.	Manage side stand efficiently.	Side work duties Closing duties

COURSE UNIT XIII

PROCEDURES FOR STOREROOM CONTROL

OBJECTIVES: Identify procedures used in compiling orders, receiving, and storing food and supplies.

Describe reasons food and supplies are issued to employees.

TASKS	WORK EXPERIENCES	STUDY ASSIGNMENTS
42. Follow standard procedures for receiving food and supplies.	Check in food and supplies ordered in an efficient and orderly manner.	Forms used for receiving food and supplies Necessity for checking both quality and quantity of goods received Procedures to follow when receiving food and supplies Types of scales used for receiving goods
43. Requisition or issue food and supplies.	Issue food and supplies to workers in the food service operation.	Forms used for requisitioning food and supplies Importance of filling only authorized requisitions
44. Store food and supplies in appropriate facilities and at proper temperatures.	Store food and supplies in appropriate facilities. Care for storage facilities.	Principles of storing food and supplies Temperatures appropriate for different types of storage
45. Assist with inventory of food and supplies.	Take inventory accurately.	Purposes of inventories Procedures for taking inventories

INSTRUCTIONAL MATERIALS
FOR
STUDENTS

WHAT IS A COURSE OF STUDY?

INTRODUCTION TO STUDENTS

Bobby: What's this new course of study we're going to be using in our HECE (Home Economics Cooperative Education) class all about? The cover looks great, but I don't know about what's inside.

Kathy: I think it's going to be a big help to us both in class and on our jobs. We'll use it in class on the days when we're supposed to study about our particular jobs.

Bobby: That should help, I guess. What do we do--start at the beginning and go straight through it?

Kathy: Not necessarily. The course of study is divided into units and topics related to tasks we might perform on our jobs. Our training plans will tell us which lessons to study. We will be studying in class about the things we are learning on our jobs.

Bobby: You mean I don't have to go through all of it? That sounds great!

Kathy: Well, since jobs vary so much and the authors tried to include information for different kinds of jobs, there may be some units that won't apply to us right now. But I think it helps to know what else is going on where we work or what some of the other job opportunities are. The more we know, the more successful we'll be on our jobs and the better chance we'll have to get a job somewhere else if we move away from here.

Bobby: I suppose you're right about that. Besides, I noticed some units, like the one on sanitation, that would apply in one way or another to everyone employed as a food service employee. What if the course of study says to do something one way, and your supervisor wants it done another way?

Kathy: That probably won't happen, but if it should, always go by what your supervisor wants. After all, he hired you to do the job he needs done.

Bobby: Now I have another question. I saw references listed at the beginning of some of the topics. Do we have to read those? Isn't the same information in the course of study?

Kathy: No, the references include different information so it's important that we read them as well as the course of study. I know it's a bother to get the references sometimes, but there would be no point in putting something in the course of study that was already available somewhere else. Besides, I've found some information that wasn't assigned in the references that was helpful to me.

Bobby: I saw questions, assignments, and suggestions for group work at the end of each topic. What's the difference? They all sound like work to me.

Kathy: The questions are to help us see if we understand what we've read, and the assignments give us a chance to apply what we've read to our jobs. The assignments help us see how the things we've learned relate to what we do. There's no right or wrong answer to an assignment, what we do is left up to us. The suggestions for group work give us a chance to work together on things we all need to learn. Working together gives us a chance to share problems and ideas. Besides, its more fun than working by yourself all the time.

Bobby: I noticed some unfamiliar words that were underlined and followed by definitions. I hope the course of study explains all the new words.

Kathy: I'm sure it explains most new words, but it's impossible to know every word that might be new to each and every student. So, when I don't understand a word, I look it up in the dictionary.

Bobby: That's a good suggestion, I sometimes forget how helpful dictionaries can be!

Kathy: Any more questions?

Bobby: Not right now. I want to do well on my job and I think the course of study will help me. I'm ready to get started on Unit I.

INDIVIDUAL STUDY RECORD

Use the chart below to keep a record of your studies. Note the date you complete each part of a lesson and your grade or a check mark in the correct columns. When you have completed all the lessons in one unit, ask your teacher for the unit test.

Lesson	Study Questions		Assignments		Group Work		Unit Test	
	Date	Grade	Date	Grade	Date	Grade	Date	Grade

UNIT I-1

WHAT IS A FOOD SERVICE EMPLOYEE?

SUBJECT: Job Opportunities in Food Service

TASK: 1. Accept instruction and guidance from supervisory personnel in performing duties assigned to a food service employee.

OBJECTIVES: When you finish this lesson, you should be able to
a. describe the various tasks assigned to employees in different areas of food service
b. summarize job opportunities in food service.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 12-37, 45-94.

The increasing number of food service establishments creates endless opportunities for careers in the food service industry. The food service industry serves everyone at one time or another. Americans eat about 25 per cent of their meals away from home. Public eating places serve an average of 800 million meals each week. However, a few years ago, few families ate out. Some reasons for the increase in meals eaten away from home include: (1) our higher standard of living, (2) the increase in leisure time, (3) the inability to hire help in the home, (4) the increased number of women working outside the home, and (5) the desire for specialized foods. These reasons account for the growth of the food service industry which ranks fourth in size among industries in the United States.

Approximately 550,000 commercial and institutional food service establishments operate in the United States today. These establishments employ over 2,000,000 people. More than 150,000 openings are expected annually in the restaurant industry alone through the mid-1970's. Thus, the professional opportunities in food service are tremendous. High schools and colleges now offer training in the various areas of food service management and food preparation. The number of openings in food service occupations indicates the importance of and need for trained personnel in every phase of the industry. An employee with interest, ability, and training will find many opportunities in food service.

Food service positions offer many opportunities for advancement. The restaurant industry, in particular, offers chances to progress almost as fast as the employee is willing and able to assume the additional responsibility.

A few years ago, a person could become manager of a restaurant by working up from the job of busboy or busgirl. This is still possible in many of the specialized fast-food operations today. Top-paying jobs in larger organizations, however, may require either an associate degree or a bachelor's degree in food service management. As a rule, larger establishments require more education for management trainees and prospective managers. Many community colleges offer degrees in restaurant management. Scholarships for promising young men and women are often available from local restaurant associations. Employers sometimes send an employee to college to further his education and increase his value as an employee.

Food production involves a wide range of skills. Jobs range from pantry worker to executive chef. Many highly-skilled food service workers obtained their training in a branch of the military. Some of the most famous chefs in the United States trained in the traditional apprentice programs in Europe. A limited number of apprentice-type programs are available in the United States. The only school in the United States devoted to training chefs is the Culinary Institute of America located in Hyde Park, New York. Most persons in the food service industry change positions to advance their careers as they acquire additional skills.

Each person in food production and service is dependent on other food service employees. Failure of even one employee to perform his job properly affects every other employee in the restaurant. For example, if the busboy is slow in clearing tables and resetting them, customers pile up waiting for clean tables. The kitchen begins to run out of clean dishes. Waitresses may have to interrupt their duties in order to clean off tables. Customers begin to grow impatient: some are tired of standing and waiting for a table; others are unhappy that the waitress is too busy to refill their coffee or take their orders. Waitresses delay picking up orders from the kitchen. The delay affects the quality of the food. This angers the kitchen staff. Before long, everyone in the restaurant is short-tempered due to the additional pressure placed on them.

Every single job in a restaurant is important! It takes the dedicated efforts of each employee to have a smooth, uninterrupted operation. Happy, efficient employees guarantee happy, satisfied customers.

TASKS PERFORMED BY FOOD SERVICE EMPLOYEES

Busboy or Busgirl

At the entry level, busboys or busgirls work primarily between the serving and the dishwashing section of the kitchen. They remove dishes, silverware, glasses, and linens from the tables. They systematically place items on trays or carts, transfer the loaded trays or carts to the kitchen or dishroom, and deposit the items in specified containers or areas. The busboy or girl also cleans the surfaces of the tables and chairs and maintains a supply of linens, table settings, and other necessary items convenient to the serving area.

General housekeeping duties include mopping or vacuuming floors daily; cleaning thoroughly the surfaces of tables, chairs, and serving stations; and replacing all the equipment and supplies that are required for the assigned area. Wiping up spilled food or liquids promptly is essential.

The entry level employee assists the waiter by setting the tables with silverware, glasses, and linens; by filling condiment containers; and by carrying heavy trays of food. (Condiments are flavorings used to season foods.) Occasionally he may serve extra items to the customers. Other duties include making the coffee and iced tea, filling the beverage boxes, checking out supplies from the storeroom, filling condiment and ice containers, and arranging tables for special groups.

The overall responsibility of the beginning food service employee is to maintain the orderliness and cleanliness of the serving area. Bus service is an important job because cleanliness is essential to the successful operation of any food service establishment.

Waiter or Waitress

Waiters and waitresses work primarily in the serving area of the food business. They take orders for food and place orders for each course in proper sequence in the kitchen. When the food is ready, they carry it from the kitchen to the tables, where they serve the food using prescribed techniques. They also itemize and total checks and present them to the customers.

Service personnel are expected to make their customers feel welcome and comfortable. They must maintain an awareness of the needs of the customers and fulfill promptly any reasonable requests made. They must maintain the neatness of the table at all times during the serving period. Waiters and waitresses present menus to customers and offer suggestions upon request.

Other duties may include preparing menu folders, arranging tables for special groups, making beverages, assembling orders, and filling condiment containers. In some restaurants, duties include receiving payment from the customer and returning change to the customer.

Housekeeping duties may include clearing the tables, disposing of the used items in proper locations and containers, and cleaning off the tables and chairs. Waiters and waitresses are responsible for the overall appearance of their assigned area.

The most essential responsibility of a waiter or waitress is to serve the customers efficiently and safely in a courteous and friendly manner. Such service promotes the success of the food service business where the waiter or waitress is employed.

Cook's Helper

Other entry level jobs in food service involve working as a cook's helper, kitchen helper, dishwasher, or pot washer, depending upon the type and size of the operation. These employees are responsible for performing the simpler tasks in food preparation. Maintaining sanitary and orderly conditions for equipment and surroundings is necessary in any food service job.

Cook's helpers perform many simple food preparation tasks. Cook's helpers wash, peel, and chop fruits and vegetables. They watch and stir foods to prevent burning of foods while cooking. They weigh or measure staples for the cook. They prepare beverages. The cook's helpers may add finishing touches to prepared foods, assist in assembling orders placed by the waiter, and verify the orders after they are assembled. Cook's helpers may do only one type of food preparation or be assigned in a variety of preparation centers.

Dishwasher or Pot Washer

Tasks in sanitation and maintenance involve keeping the kitchen and equipment clean. This employee sweeps, mops the floors, cleans and sanitizes work tables, butcher blocks, pots and pans, steam tables, and steam trays. Knowledge of equipment care is essential for this job. Other tasks may include washing and polishing silverware, and washing glasses and dishes. This employee may carry trays of food or materials to specified locations and remove and replace equipment and supplies in assigned areas as needed. He may also check out needed supplies from the storeroom and fill staple containers.

In any food service establishment, new employees are taught to observe the basic principles of safe food handling. In addition to personal cleanliness and appearance, the trainee is expected to maintain good work habits. Since a clean environment is necessary for sanitary preparation of food, the trainee is expected to keep work areas, surfaces, and utensils clean and orderly.

With the increased costs of labor and food, employees must be as versatile as possible. Employers cannot always afford to hire separate personnel for each of the jobs above, so one person may be expected to carry out a variety of tasks. An employee who welcomes opportunities to work at different types of job assignments increases his ability to fit into a variety of types of positions in the food service industry.

QUESTIONS:

1. The factors contributing to the growth of the food service industry are
   ________________, ________________,
   ________________, ________________,
   and ________________.

2. Food service units that provide a meal on the job for employees are
   ________________.

3. When an established food operation receives a fee for allowing others to use its name, methods, and building design, the establishment is known as a ____________.

4. The four major areas in most food service establishments are ____________, ____________, ____________, and ____________.

5. The area where food is delivered, stored, and prepared is the ____________.

6. The area where food is served, sold, and consumed is the ____________.

7. The area which contains the equipment, work space, and storage space needed to carry on the department's activity is the ____________.

8. List five employees that work the front-of-the-house.

9. List five employees that work the back-of-the-house.

ASSIGNMENTS:

I. List the tasks you perform on your job. Discuss with your teacher the kinds of information you need in order to do a good job at your training station.

II. Ask your training sponsor to describe the training and qualifications needed for advancement to a management position in your field. Write a brief description of ways to advance in your field.

GROUP WORK:

I. Discuss with class members the tasks you perform on your job. Compare the tasks you perform with tasks performed at other training stations.

II. Working with other food service employees, make a group presentation to the entire class describing career opportunities in the food service field. Use visual aids to make your presentation interesting.

III. Make posters describing career opportunities which HECE students can begin working toward while they are in high school. Place posters in prominent places in school to encourage students to enroll in the program during spring recruitment.

IV. View a filmstrip on the careers in food service.

V. With other food service employees, prepare a list of questions to be used in conducting a survey of local food service establishments. Information to be learned could include: starting salary, salary increase possibilities, job advancement opportunities, the average amount of tips collected, and the hours when one can work.

UNIT I-2

WHAT IS A FOOD SERVICE EMPLOYEE?

SUBJECT: Employee Qualifications

TASK: 1. Accept instruction and guidance from supervisory personnel in performing duties assigned to a food service employee.

OBJECTIVES: When you finish this lesson, you should be able to
a. evaluate yourself in terms of qualities which contribute to success as a food service employee
b. determine attitudes which would contribute to successful job performance.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 38-43.

ATTITUDES

When the food service employee begins work at his training station, he is on the first rung of the "world of work" ladder. Whether he falls off, remains on the same rung, or moves up to higher rungs depends largely upon his personal qualifications and interpersonal relationships with other personnel. He learns, sooner or later, that it is often easier to secure a job than to hold it and to earn promotions.

If the food service employee wants to be successful, he should examine his attitudes toward his employer, his fellow workers, and his job. The relationship between these attitudes and success on the job cannot be overemphasized.

Attitude Toward Employer

An important attitude to develop is loyalty to your employer. This means that you are concerned with the services provided in the food service establishment where you are employed. You want the customers, students, or patients to receive the best food and service possible. Even though you may feel your role is insignificant, no one else is assigned your tasks, and it takes everyone working together to keep things running smoothly. Willingness to observe the rules and policies of the business is also part of being loyal to your employer.

The ability to follow directions and accept suggestions and criticisms improves your job performance. Your supervisor's comments are meant to help you to do a better job, not to hurt your feelings. Your employer usually has good reasons for expecting tasks to be performed in a certain way. An attitude of open-mindedness is an asset on any job.

Attitude Toward Fellow Employees

Your ability to get along with others influences your success as a food service employee. A friendly, sincere manner, a willingness to do your share of the work, and respect for the knowledge and skill of more experienced employees contribute to good relationships with fellow employees.

One of the most important factors in working as a member of the food service team is to look for jobs to do when your tasks are completed. Assisting other employees provides additional job experiences and lets them know that you are cooperative. Flexibility is another important trait. Emergencies may occur which disrupt the usual work schedule, and you may be asked to do some extra task or help another employee with his job. The ability to change your activity or line of thought quickly is part of being flexible.

Attitude Toward the Job

A food service employee's job deserves his undivided attention and his best efforts. He should bring to his job a genuine interest, a positive attitude, and good physical condition. These qualities help him deliver high quality performance.

EMPLOYMENT ETHICS

Absenteeism

Food service establishments divide their work loads so that every employee must report to work for the operation to run smoothly. Many persons depend upon your services, and you are needed every day that you are scheduled to work. In the event of an emergency, such as illness or death in the immediate family, notify your supervisor at once. An excessive number of unexcused absences is cause for dismissal.

During working hours, your supervisor should know where you are at all times in case of an emergency. Do not leave the premises without your supervisor's permission.

Tardiness

Reporting to work on time is important. Your tardiness leaves your work undone, or other employees have to double-up to do it. If you find that you cannot report to work on time because of an emergency, notify your supervisor as early as possible. Repeated tardiness is usually a reason for dismissal.

Smoking and Eating

In the food service establishment where you are employed, you are responsible for knowing the rules governing smoking, coffee breaks, and length of mealtime. You should not chew gum while you are on the job. You should not sample the food, eat in the kitchen, or eat behind the service counter while working.

Alcoholic Beverages

Drinking on the job, possessing alcoholic beverages, or reporting to work under the influence of alcohol is forbidden.

Misuse of Work Time

Avoid the misuse of time when you are scheduled to work. Personal phone calls are a misuse of work time. Keep your personal phone calls to a minimum. When you must make a personal phone call use a pay phone. By using the pay phone you will leave the business telephone lines open for important calls. Undue loafing, idleness, gossip, visiting with friends, horseplay, and disorderly conduct represent waste of time. This misuse of time interferes with employees who are trying to do their work.

Use of Abusive Language

Watch your language. Cursing is out of line on any job. Use the best grammar you can and improve your grammar, if you need to.

Dress Code

You are responsible for understanding and dressing according to the dress code regulations of the food service establishment where you are employed. Personal neatness and absolute cleanliness are especially important.

PERSONAL CHARACTERISTICS

In addition to the attitudes mentioned above, there are personal traits which you need to possess. Employers not only look for these personal traits when you are applying for a job, but they also use them as a basis for evaluating you when you are one of their employees. A person's failure to keep a job is more often due to a lack of desirable personal traits than a lack of job skills. These personal characteristics may be improved and/or developed when the effort is sincere.

Some of the personal traits which are important to success as a food service employee are given in the check list below. Answer the questions honestly to see how you measure up.

WHAT KIND OF FOOD SERVICE EMPLOYEE ARE YOU?

	MOST OF THE TIME	SOMETIMES	SELDOM
1. Appearance			
Do you start the day with a smile?			
Do you check your appearance before going to work?			
Do you check your clothing for rips, missing buttons, and sagging hems?			
Is your pant length appropriate?			
Does your clothing fit properly without being too tight?			

	MOST OF THE TIME	SOMETIMES	SELDOM
Appearance (cont'd.)			
Is your hair clean and neatly arranged?			
Is your hair cut appropriately?			
Do you wear a hair net or cap when on duty?			
Females, is your makeup correctly applied in moderation on a clean face, not over old make-up?			
Males, are you clean-shaven?			
Do you refrain from wearing jewelry?			
Are your teeth clean and your breath fresh?			
Are your hands clean and your nails neatly manicured?			
Females, do you remove nail polish when it begins to chip?			
Do you take a daily bath and use a reliable deodorant?			
Are your shoes sensible, clean, and in good repair?			
Do you maintain proper posture when standing or walking?			
2. Voice			
Do you speak in a pleasant manner and moderate tone?			
Do you have a reasonable command of the English language?			
3. Cooperation			
Are you willing to cooperate with your co-workers? your supervisor? (Or do you sometimes refuse to cooperate and do things your own way?)			
Are you willing to try to work with someone in spite of a personality conflict?			
Do you observe and obey the rules and policies of the food service operation?			
Are you willing to do any job to which you may be assigned?			
Are you willing to do jobs or routine tasks not originally assigned to you?			

	MOST OF THE TIME	SOMETIMES	SELDOM
4. Work Habits			
Are you careful, not wasteful, in the use of food supplies and materials?			
Do you handle and use equipment carefully?			
Are you prompt and efficient (Or do you waste time?)			
Do you accept and practice new or more efficient techniques?			
Do you show interest and enthusiasm in what you are doing? (Or do you get bored and distracted easily?)			
Does your work meet the standards of the food service operation where you are employed?			
5. Accuracy			
Do you follow directions without the need of having them repeated?			
Do you complete jobs assigned to you?			
Do you complete jobs on time?			
Do you stay at your assigned station?			
Do you work well without constant supervision?			
6. Courtesy			
Are you always courteous and polite to fellow employees and your supervisor?			
Are you courteous and polite to customers?			
Do you respect the desires, interests, and opinions of your fellow workers?			
7. Dependability			
Can your supervisor depend on you for high quality work? (Or does it vary according to your feelings?)			

	MOST OF THE TIME	SOMETIMES	SELDOM
Dependability (cont'd.)			
Can your employer depend on your loyality and honesty? (Or do you complain to your co-workers?)			
Are you able to work under pressure? (Or do you become nervous, irritable, inefficient, and upset?)			
Can your employer depend on you to maintain high standards while doing repetitious work?			
8. Health and Sanitation			
Are you in good physical health?			
Do you eat properly and get plenty of rest? (Or do you drag on the job?)			
Do you practice good posture?			
Do you watch your weight, whether overweight or underweight?			
9. Initiative			
Are you able to see what needs to be done without being told?			
Do you show leadership when you are in charge without being "bossy"?			
10. Promptness			
Are you on the job regularly?			
Are you punctual and do you begin work right away?			
Do you call when you are unable to go to work?			
11. Self-control			
Do you keep your temper under control or do you talk back to the boss?			
Is your disposition pleasant at all times?			
Do you have the friendship and respect of your supervisor and co-workers?			
Do you accept criticism and remain friendly?			

QUESTIONS:

1. Make a list of at least six attitudes or traits which contribute to the success of a food service employee.

2. Two important factors for the food service employee to remember in regard to absenteeism are:
   a.

   b.

3. Explain what is meant by "misuse of work time."

ASSIGNMENTS:

I. Select at least two or three areas in which you placed your check in the "Sometimes" or "Seldom" columns when you went through the check list in this unit. Work out a plan for changing these attitudes or traits. Follow through with your self-improvement campaign. An employer always appreciates willingness to improve. Turn your plan into your teacher. Occasionally, discuss with her the progress you are making.

II. List the policies of your training station regarding dress, absences, vacations, and employee benefits. Keep the list in your notebook for future reference.

III. Write a code of ethics which would apply specifically to your food service job. Compare this code with those produced by others in the class for their jobs. Discuss the reasons for the similarities and differences in the codes.

GROUP WORK:

I. Prepare a "question box" for questions relating to job ethics. Draw out questions for class discussion.

II. In small groups, discuss ways employees can promote better communications with the employer. What are the responsibilities of the employer and of the employee? Share your ideas with other groups.

III. View a film which includes pointers on grooming, appearance, and personal hygiene and which dramatizes the importance of hospitality, cleanliness, and efficiency.

UNIT II-1

SANITATION

SUBJECT: Food Contamination and Food-Borne Illnesses

TASK: 2. Handle food, beverages, equipment, utensils, and table settings in ways to prevent contamination.

OBJECTIVES: When you finish this lesson, you should be able to

a. identify ways disease may be spread through careless handling of food and equipment
b. analyze situations in which sanitation procedures have been violated
c. evaluate your own personal habits of cleanliness in relation to accepted sanitation procedures
d. maintain cleanliness in order to eliminate or control common pests
e. identify unsafe food.

REFERENCE: Cornelius, Ethelwyn G. *Food Service Careers*. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 278-280, 282-287.

At least one million persons in the United States suffer from food-borne illnesses each year. These illnesses occur when the people responsible for the preparation and serving of food do not observe safe and sanitary methods of food handling.

Food-borne diseases or illnesses result when contaminated food or drink is taken into the body. These illnesses fall into two main categories: food infections and food poisoning.

Food infections are caused by eating foods containing harmful bacteria. The food acts as a carrier for the bacteria. The bacteria multiplies in the body of the individual and produces a food-borne illness. *Salmonella* and *Streptococcus* (Strep) are two kinds of bacteria transmitted in foods. When eaten, these bacteria produce a food infection.

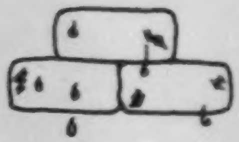
Food poisoning results from eating foods in which bacteria have grown previously and developed a toxin or poison. *Staphloccus* (Staph) and *Clostridium botulinum* are two kinds of bacteria that produce a poison or toxin in the food which results in food poisoning.

For these bacteria to grow and multiply, certain conditions must exist. Bacteria need: 1) food, 2) moisture, 3) warm temperatures, 4) darkness, and 5) oxygen (with the exception of botulinum). If the conditions are right, the bacteria will grow and multiply quite rapidly.

Food-borne disease prevention is essential. The food service employee needs to know how to prevent food-borne illnesses. In addition, he must want to prevent the occurrence of these illnesses. He must be alert, cautious, and conscientious as he carries out his responsibilities in handling and serving food.

There are four basic rules which can be used as guidelines in the handling and serving of food.

I. Keep Food Cold. Low temperatures do not kill food-poisoning bacteria, but as you can see on the chart on page 26, their growth can be slowed or stopped. Temperatures of 40° F. (4.4° C.) or below are necessary to reduce the growth of bacteria. Freezing stops growth of bacteria.



Refrigerate all perishable foods as soon as possible after their delivery. Refrigerate food products such as salads or cream-filled desserts containing moist carbohydrates or proteins immediately after preparation. Allowing these foods to stand at room temperature gives bacteria a chance to grow rapidly.

Refrigerate leftovers as soon as possible. Label all leftovers as to the contents of container and the date stored. Warm leftovers quickly. It is not advisable to keep leftovers more than 24 hours. Do no mix leftovers with fresh food. Food that has been held at room temperature for several hours should not be considered safe and cannot be made so by refrigeration.

The use of shallow pans, about 4 inches deep, for refrigeration of large amounts of food allows the food to cool more rapidly than it would in deep containers. This rapid cooling allows less time for the growth of bacteria to occur. Stirring the food during cooling also helps to reduce the length of the cooling time.

In regard to the storage of leftovers, some people have the misconception that food should be allowed to stand at room temperature for several hours. The belief is that putting food into the refrigerator while it is still warm will cause it to "spoil." This idea was common in years past when ice was used to keep food cold. Placing hot foods in the "ice box" caused the ice to melt. Refrigerating hot foods does not cause spoilage unless the cooling unit is overloaded. Then the temperature in the refrigerator is raised to a level where spoilage starts. If a large amount of hot food needs to be refrigerated, partially cool it by placing the pans of food in cold water before putting them in the refrigerator. Store all foods in covered containers.

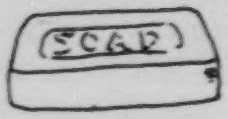
II. Keep Food Hot. The danger zone for the growth of bacteria is between 40° and 140° F. (4.4° and 60° C.). For this reason, hold hot foods at temperatures of at least 140° F. (60° C.).

Thoroughly cook foods such as pork, poultry, eggs, ground meats, and dehydrated food products to destroy certain types of bacteria. The center of the food should reach temperatures of 165° to 170° F. (73.9° and 76.7° C.).

III. Keep Food In Danger Zone Only A Short Time. Do not hold foods at temperatures between 40° and 140° F. (4.4° and 60° C.) for more than four hours. This time is cumulative; i.e., one hour in the morning, one hour another time, and two hours at a third time add up to the four hour limit.

Certain foods are more likely to be contaminated during these in-between temperatures than others. Do not hold turkey or other poultry dressings at these temperatures for more than four hours. Refrigerate left-over poultry meat, dressing, and gravy immediately. Sandwich fillings, salads, and cooked hams are examples of other foods which should not stand at room temperature more than four hours. Defrost all frozen meats and foods in the refrigerator, not on the counter top.

IV. Keep Food Clean. One way to keep food clean is to use clean equipment. Three "tips" for general cleaning of equipment include the following.



1. Clean all kitchen equipment used in the preparation or serving of food thoroughly after each use.
2. Clean and sanitize all utensils used in the preparation and service of food thoroughly before use.
3. Handle and store clean equipment properly to prevent contamination. Store clean dishes in closed storage, or place upside down on wire racks. Store silver with handles, tongs, etc., all turned the same way so that it can be handled without touching the part placed in the mouth.

Food may be infected by:

1. a person who sneezes or coughs.
2. hands that have not been washed properly.
3. fingernails which have not been cleaned properly.
4. the use of hands instead of the proper utensil.
5. dishes not sanitized properly.
6. employees who are not well.
7. persons with cuts or infections on their hands.

The basic rules for food sanitation practices can be shortened into four clues to remember when handling food. Notice the repeated use of the number four.*

1. 4 rules--cold, hot, time, clean
2. 40° F. (4.4° C.) and below--4-inch deep storage pans
3. 140° F. (60° C.) and above
4. 4-hour incubation time

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*Adapted from Current Practices in Food Protection, U.S. Department of Health, Education, and Welfare, Public Health Service. Cincinnati, Ohio. p. 7-3.

WAYS TO PREVENT

Name of Illness and Its Symptoms	Causative Agent	Foods Usually Involved
Staphylococcus (Staph) Disease: Food Infections (Vomiting, cramps, abdominal pain, diarrhea, headache, nausea. Sometimes accompanied by fever.)	Staphylococcus entero-toxin (a poison developed by Staphylococcus when it grows in food.)	Cooked ham or other meat; chopped or pulverized food; cream-filled or custard pastries; dairy products; Hollandaise sauce; bread pudding; potato salad; chicken, fish, and other meat salads; "warmed-over" food.
Salmonellosis Disease: Food Infections (Fever, headache, exhaustion, nausea, vomiting, cramps, diarrhea.)	Over 800 types of Salmonella bacteria; capable of producing gastrointestional illness	Moist foods; prepared or unheated foods, such as custard-filled pastries, cream pies, egg or potato salads; dairy products; shell fish; meat; poultry; "warmed over" food.
Streptococcus (Strep) Disease: Scarlet Fever, Septic Sore Throat (Inflammation of the nose, throat, and mouth; red rash.)	Streptococci bacteria	Foods contaminated with nasal or oral discharges from person who has illness or is carrier. Foods contaminated with body waste on unclean hands.
Clostridium botulinum Disease: Botulism (Nervous symptoms, double vision, weakness and paralysis of muscles. Inhibition of body secretions, inability to swallow, constipation. Most likely to be fatal.)	Toxins of Clostridium botulinum	Improperly processed or unrefrigerated foods of low acidity.
Shigellosis Disease: Bacillary Dysentery (Bloody diarrhea, nausea, exhaustion.)	Shigella bacteria	Foods contaminated with body wastes or unclean hands.
Trichinella spiralis Disease: Trichinosis (Nausea, abdominal pain, diarrhea, muscular pain, chest pain, fever.)	Larvae of Trichinella spiralis	Raw or insufficiently cooked pork or pork products.

FOOD-BORNE ILLNESSES

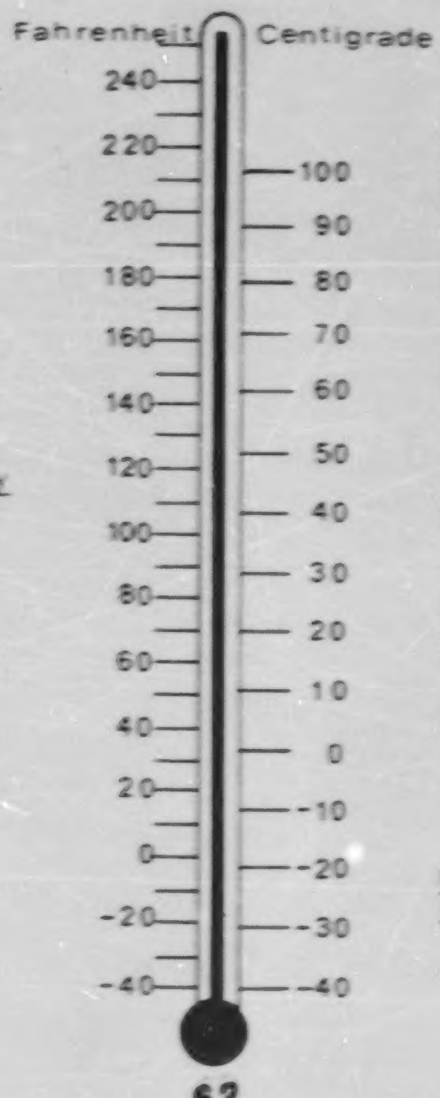
How Introduced Into Foods	Preventative or Corrective Procedure
Usually by food handlers through nasal discharges or pus in local skin infections (acne, pimples, boils, scratches, and cuts).	Handle food only when you are free from respiratory illnesses and infections. Practice sanitary work habits; wash hands frequently. Handle food with utensils, not hands. Keep cold food cold, hot food hot; cool food rapidly to safe temperatures.
Intestines of humans, birds and animals; sometimes carried by a healthy person; raw contaminated meat and poultry, eggs, and unpasteurized milk.	Use inspected or certified meat products. Control rodents and insects. Wash hands frequently. Keep surfaces, equipment, and utensils sanitary. Keep cold food cold, hot food hot; cool food rapidly to safe temperatures.
Coughing, sneezing, unsanitary food handling.	Use separate work surfaces for raw and cooked meats. Wash hands after handling raw meat, toileting, or touching soiled articles. Keep kitchen free of dust. Clean meat-cutting utensils after use. Keep food at safe temp.
Soil and dirt. Bacteria not killed in inadequately heated foods.	Use commercially canned foods. Store canned foods in cool room for only one year. Inspect cans before opening for bulges, damage, rust, leaks. Discard contents if they spurt out on opening the can, look bubbly, are off-odor, or are off-color. Store smoked fish at 38° F. or below. Never taste suspect food; boil for 15 min. and discard.
Unsanitary food handling.	Persons who are ill or carriers must not be allowed in food preparation and service area. Use pure water. Use leakproof sewer pipes and proper sewage disposal. Control flies and rodents.
Raw pork from hogs fed uncooked, infected garbage.	Use inspected pork and pork products. Serve pork (including sausage) well done. Cook roasts until center temperature is 165° F., preferably 170° F. Cook pork until meat turns gray.

Never use the contents from a can that bulges, leaks, or is dented at the seam. Never use a can if the contents foam, have an off-color, or contain a milky liquid.

Special Precautions for Isolated Patients. In a hospital or nursing home, the nursing service may have a special plan for patients in isolation. They may use disposable tableware rather than standard dishes and flatware. If nondisposable items are used for salt, pepper, or sugar, keep them in the same room during the entire isolation period. Immediately destroy left-over food used by an isolated patient to avoid further contamination of patients and dietary employees. Destroy disposable dishes; sanitize others separately.

THE EFFECT OF TEMPERATURE ON CONTROLLING BACTERIA GROWTH IN FOODS

The illustration below shows the effect of temperature on the control of bacterial growth in foods.



Bacterial control in low acid foods

Keep hot foods 145°F. (62.8°C.) or above

Refrigerate foods rapidly through this range (60-150°F.; 15.5°-65.5°C.)

Some bacteria growth (40-60°F.; 4.5-15.5°C.)

Slow bacteria growth (30-40°F.; -1.1-4.5°C.)

Frozen food storage 0°F. (-17.8°C.) or less

Staphylococcus Toxin Resistant to boiling (212°F.; 100°C.)

Botulinus Toxin Inactivated by boiling

Dish Sanitation (168 - 180°F.; 75.5-82.2°C.)

Machine Dishwashing (140-160°F.; 60-71.1°C.)

Body Temperature 98.6°F. (36.9°C.)

Rapid bacteria growth in food (60-120°F.: 15.5 - 48.9°C.)

Keep most cold foods (34-40°F.; 1.1-4.5°C.)

QuickFreeze -10°F. (-23.3°C.) and below

SANITATION PRACTICES IN FOOD HANDLING

Not only are food-borne illnesses transmitted to foods, but communicable diseases are also spread by way of food. Examples of these are respiratory, intestinal, and skin diseases. All of these diseases may be transmitted by infected employees. The general sanitation rules listed below are good habits to form to protect both the health of the food service employee and those he serves.

1. Wash hands before handling food, after using the toilet, after using handkerchief, after handling garbage or poisons, and after handling dirty dishes.

   Never lick fingers or thumbs when preparing and serving foods.

   Avoid putting fingers on face, nose, or hair.

2. Always wear a hair net or cap when working in the food service area to keep hair away from food.

   Avoid putting fingers in hair because they become contaminated by the organisms which collect in the hair.

   Avoid wearing soiled aprons and outer garments.

   Keep fingernails clipped and clean.

3. Do not chew gum or smoke near the food preparation and service area.

   Do not cough or sneeze near food or dishes.

   Treat and report sores, rashes, boils, or other skin eruptions.

4. Touch only the handles of forks, knives, and spoons used in preparing foods, serving patient trays, or setting tables for dining room service.

5. Handle bowls, glassware, and cups properly.
   a. Do not touch the rims of glassware and cups.
   b. Do not put fingers inside mixing bowls, plates, and saucers.

6. Use tongs for:
   a. placing ice in glasses or pitchers.
   b. serving pastry, rolls or doughnuts.

QUESTIONS:

1. Why is it important that hair nets or caps be worn by food service employees?

2. At what temperature range do bacteria grow most rapidly in foods?

3. What is meant by food-borne illnesses?

4. Few cases of food poisoning or infections occur in the United States.
_____a. True
_____b. False

5. What foods are usually associated with salmonellosis?

6. Staphloccus is a bacteria that produces a toxin in the food which results in food poisoning.
   a. Where are staphylococcus germs found?

   b. What happens when staphylococcus germs reproduce in food?

   c. How can staph food poisoning be prevented?

   d. What foods are most often involved in staph poisoning?

7. Botulism, a form of food poisoning, results from eating foods in which bacteria have grown and developed a toxin.
   a. Where is the botulism germ found?

   b. In what kinds of food is it most frequently found?

8. Which of the three germs causing food-borne diseases is most likely to be fatal?

9. What are the two main categories of food-borne illnesses?

10. A chicken noodle casserole was prepared in the morning; it was left in the oven, which was turned off, until late afternoon; and then it was warmed and served. Why was this not a wise procedure? What should have been done?

11. Sally made some ham salad and turkey salad sandwiches and put them in the refrigerator until serving time. Was this necessary? Why?

12. Ten gallons of stew had been prepared for use the next day. It was allowed to cool at room temperature for several hours and then placed in the refrigerator in the 10 gallon container. What two mistakes were made in this situation?

13. Jim cut his finger, and it was slightly swollen. However, he did not say anything about it to his supervisor when his supervisor told him to remove some chicken from the bones. Which germ that causes a food-borne illness might Jim have spread to the customers through his infected cut?

ASSIGNMENT:

I. Choose at least three ideas from this unit that you can do to improve your work habits in relation to cleanliness and sanitation at your training station. Work out a plan for improvement in these areas. Turn this plan in to your teacher for approval. With the aid of your teacher, evaluate your progress each week for as long as necessary to form the habit.

GROUP WORK:

I. Prepare rodac plates or agar plates to show the growth of bacteria resulting from lack of personal cleanliness. Cough or sneeze on different agar plates. Touch one agar plate with dirty hands and another agar plate with clean hands. Place a hair on an agar plate. Let a cockroach walk on an agar plate. Incubate the agar plates (keep the plates warm) so the bacteria will reproduce rapidly. Borrow a microscope from the science department to view the bacteria. View the plates the day that they are prepared, in 24 hours, and several days later.

II. View a film on safe food handling to learn the causes of food-borne illnesses, the kinds of bacteria that cause them, and the conditions needed for bacterial growth.

UNIT II-2

SANITATION

SUBJECT: Sanitation Codes

TASK: 3. Follow federal, state, and local sanitation codes.

OBJECTIVE: When you finish this lesson, you should be able to
a. relate provisions of sanitation codes to the duties of a food service employee.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett, Co., Inc., 1974. pp. 276-278.

The main purpose of food sanitation codes is to protect the consumer of food. Specific purposes of the codes are to

1) protect food against infection by observing sanitary standards. These standards reduce the opportunity for bacteria to gain entrance into the food and to multiply.

2) insure wholesomeness of food so that it is clean, free from contamination, and suitable for human use.

3) meet customer expectations by providing a clean, appealing, pleasant atmosphere for meal service.

Food sanitation programs cover all eating and drinking establishments, as well as food sources and the transportation of foods. Food sanitation programs are based on nationally accepted public health principles and standards, but methods may vary due to local customs and problems.

The United States Department of Health, Education, and Welfare and the United States Department of Agriculture are the two federal agencies most concerned with the sanitary aspects of food production. Two divisions of the Department of Health, Education, and Welfare are the Food and Drug Administration and the Public Health Service. These divisions set up model codes which may be adopted by states, counties, and cities.

Other agencies which have authority over food sanitation are state and local agencies, city health departments and boards of health, and the state departments of health. In general, the Public Health Service sets up the food sanitation code which is widely adopted by state and local health departments. This code defines applicable terminology; sets standards for food supplies and protection; sets standards for personnel and for food equipment; and provides for the inspection of sanitary facilities, contamination controls, physical facilities and operations.

A permit to operate may be issued to an establishment on the basis of the adopted code. Inspection of the food service business is done at regular intervals by a competent inspector from the agency in authority. Failure to comply with standards of the code may ultimately result in suspension of the permit to operate.

The food service employee must understand
1) the importance of sanitation.
2) the reason for the sanitation code.
3) the penalty involved if sanitation regulations are not met.

Understanding sanitation helps the food service employee follow the regulations carefully.

QUESTIONS:

Agencies

Food and Drug Administration
Public Health Service
Department of Health, Education, and Welfare

Department of Agriculture
State Department of Health
City Health Department

Use the above list of agencies to complete questions 1, 2, and 3.

1. The two main divisions of the United States Department of Health, Education, and Welfare which set up model sanitation codes are the ____________________ and ____________________.

2. A second federal agency which is concerned with the sanitation of food is ____________________________.

3. Two types of local agencies which work with food protection and sanitation are ____________________________ and ________________________.

4. The science of cleanliness is ___________________________________.

5. Preventing and arresting harmful germs and bacteria in patient areas or operating rooms is maintaining ______________________ conditions.

6. Standards for sanitation in food service are established and enforced by laws known as ___________________________________.

ASSIGNMENTS:

I. Find out what laws protect food in your city. What sanitation ordinances are in effect where you live? Which of these laws and ordinances affect you on the job as a food service employee?

II. Listen to a resource person from a restaurant or health department present reasons for sanitary practices in handling food. What laws help promote sanitary practices in public eating establishments?

GROUP WORK:

I. Compare the information found for the above assignment with that obtained by classmates.

II. Explain the need for sanitary practices by participating in a circular response (class members sit in a circle and take turns responding) to finish statements concerning sanitary practices in food preparation and service. Examples: "I dislike a waitress who...." "Restaurants should be careful to...." "It is important to prepare food in a clean place because...." "Food served in a dirty utensil causes me to...." "Greasy smudges on a drinking glass make me feel...."

III. View a film on the role of sanitation and good housekeeping procedures in a food service establishment.

UNIT II-3

SANITATION

SUBJECT: Procedures for Dishwashing

TASKS:
4. Wash and inspect glassware, flatware, and tableware for cleanliness and spotlessness.
5. Wash utensils and cooking equipment.

OBJECTIVE: When you finish this lesson, you should be able to
a. describe proper procedures for washing dishes and equipment.

REFERENCE: Cornelius, Ehtelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett, Co., Inc., 1974. pp. 287-298.

Dishwashing consists of both the cleaning and the sanitizing of dishes and utensils. The cleaning procedure removes visible soil, detergent, and wash water from the dishes and utensils. The sanitizing treatment eliminates bacteria which cause food-borne illnesses.

Health inspectors frequently take bacteriological counts of dishes and utensils used in food service operations. Some food services conduct their own bacteriological counts. Others hire bacteriologists to make regular inspections of the dishes, utensils, and equipment used in the food service operation. The bacteriological examinations are made regularly without advance warning.

QUESTIONS:

1. What temperature is recommended for rinse water used in dishwashing facilities?

2. When three compartment sinks are used for washing pots and pans, for what is each compartment used?

3. Chemicals that stop the growth of bacteria on the surfaces of dishes, pots and pans are called ____________________ and ________________________.

4. Chemical cleansing agents are called ________________________.

5. List steps to use for washing dishes by hand:
   a.
   b.
   c.
   d.

6. How should cups and glasses be placed in dish machine racks? Why?

7. When unloading the dish machine, what steps should you follow in the care of silverware?
   a.
   b.
   c.

8. Health inspectors in most localities make frequent ________ counts.

ASSIGNMENT:

I. Outline the procedure used for washing dishes, pots, and pans at your training station. List some ways you can improve your work habits in relation to proper dishwashing procedures.

GROUP WORK:

I. Compare the procedure for dishwashing used at your training station with procedures used at others.

II. View a film on proper dishwashing methods. Note the importance of using the proper rinse temperatures and detergent.

UNIT II-4

SANITATION

SUBJECT: Cleaning versus Sanitizing

TASK: 2. Handle food, beverages, equipment, utensils, and table settings in ways to prevent contamination.

OBJECTIVES: When you finish this lesson, you should be able to

a. define the role of cleanliness in sanitation
b. describe the procedure for cleaning and sanitizing equipment.

ESTABLISHING A SANITATION PROGRAM

"Sanitation is a way of life." This statement by the National Sanitation Foundation means that sanitation is the quality of living that is expressed in the clean home, the clean farm, the clean business and industry, the clean neighborhood, and the clean community.

Sanitary conditions are of utmost importance to any establishment dealing with food preparation and service. Customers and patients expect cleanliness and sanitation. All personnel must work to insure the satisfaction of customers and patients. The management both provides facilities, equipment, and materials for developing a program of cleaning and sanitizing, and sees that the program is followed. Employees carry out the program.

Four goals of sanitation are:

1. to prevent disease.
2. to prevent food poisoning.
3. to prevent food spoilage.
4. to prevent off-odors or off-flavors from developing in food or from being transferred to food.

Cleaning and sanitizing duties are performed on a daily, weekly, and occasional basis. Each employee is responsible for the day-to-day cleanliness of his or her work station. Weekly chores, such as polishing floors or cleaning refrigerator racks, should be scheduled for specific days and have definite assignments as to which employee is responsible. Even those done on an occasional basis should have a definite assignment. Occasional tasks include cleaning grease traps, removing lint and dirt from ventilators, washing windows, etc. When there is a slack in immediate work, occasional tasks can be done by any available employee.

Cleaning is necessary to keep equipment operating properly. Inadequate care of equipment causes higher operation and repair costs. The quality of food suffers from improper or inadequate cleaning of equipment. Off-flavors can develop in foods prepared with poorly cleaned equipment. For example, coffee can absorb a bitter taste from a poorly cleaned urn due to oily substances.

Bacteria cause diseases. Even the tiniest spot of food left on equipment allows bacteria to grow. Some types of bacteria travel by air, so store equipment in an enclosed area or place upside down. Use covers on leftover food to prevent drippage from above and to retain flavors. Poor cleaning practices also encourage filthy disease-carrying pests to inhabit an area.

CLEANING AND SANITIZING

The words clean and sanitary are used frequently in the food service industry. Clean means absence of soil. Sanitary means absence of bacteria, molds, fungi, or yeast. Cleaning and sanitizing are methods used to keep utensils and equipment clean and free from bacteria.

When cleaning, use these three elements: 1) water, 2) friction, and 3) a wetting agent, such as a soap or detergent.

When sanitizing, use chemicals or temperature. Some chemicals are safe for use around food. Other chemicals are dangerous and should be used only in areas where food is not present, such as on floors or in rest rooms. Bacteria cannot live in high temperatures. Boiling an article for ten minutes is an effective means of sterilization.

Be careful not to recontaminate equipment by improper handling after it has been sterilized. Place dishes in racks for washing, then store in the same racks without touching the dishes themselves. After sanitizing grasp flatware and utensils only by the handle.

QUESTIONS:

1. In quantity food preparation, precautions must be taken to insure that the food is nutritious, _______________, and _______________ to eat.

2. Explain the statement: "Sanitation is a way of life."

3. In any food service establishment the standards of sanitation and ________ ________ should be emphasized as much as the standards of quality and cost.

4. The four sanitation goals are
   a.
   b.
   c.
   d.

5. What are three results of failure to clean equipment properly?
   a.
   b.
   c.

6. Disease and poison transferred by food to human beings are largely caused by ____________________.

7. Two safeguards against air-borne types of contamination are:
   a.
   b.

8. Poor procedures for handling food and ________________ may cause contamination.

9. What is the difference between cleaning and sanitizing?

10. The three elements necessary for cleaning are ___________, ___________, and ______________________________.

11. What two methods may be used for sanitizing?

12. Why is it a good idea for food supervisors to set up a program for cleaning and sanitizing?

True or False

______ 13. Only a few food service employees are responsible for observing high standards of cleanliness and maintenance.

______ 14. A clean utensil is always sanitary.

______ 15. Knives, forks, spoons, whips, spatulas, and similar equipment may be picked up by either end if one's hands are clean.

ASSIGNMENT:

I. Outline the procedure for cleaning and sanitizing equipment at your training station. List your specific duties for carrying out the sanitation program.

GROUP WORK:

I. Compare the procedure for cleaning and sanitizing equipment at your training station with procedures used at other training stations. Discuss the difference between cleaning and sanitizing.

II. View a film which demonstrates both sanitary and unsanitary methods of handling food and utensils.

UNIT II-5

SANITATION

SUBJECT: Pest Prevention

TASK: 2. Handle food, beverages, equipment, utensils, and table settings in ways to prevent contamination.

OBJECTIVES: When you finish this lesson, you should be able to
- a. identify common pests that are dangerous carriers of harmful bacteria
- b. explain control methods for eliminating pests from storage and food service areas.

REFERENCE: Cornelius, Ehtelwym G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett, Co., Inc., 1974. pp. 280-281.

The standard of living in the United States is one of the highest in the world. We expect to be served good, wholesome food in a clean, pleasant atmosphere. Nothing is less appetizing than a fly circling over a dining table, a roach crawling up a wall, or a mouse darting across the floor. Pests carry diseases. Any establishment handling food must take measures to eliminate pests.

The most common pests found in food service establishments are roaches, flies, ants, and rodents such as rats and mice.

INSECT PESTS

Roaches--Roaches are familiar to nearly everyone, especially in Texas' warm climate. There are many varieties of roaches, but in general, roaches have flat bodies which enable them to hide in cracks and crevices. Roaches are known carriers of Salmonella, which causes severe vomiting, diarrhea, and fever. They spread filth and disease. They are sensitive to light and feed on contaminated material in the dark. After taking germs into their stomachs, roaches spread these germs to anything they touch or to anything that touches any of their discharges. Some signs that roaches are present include stains from their droppings, a musty odor, or empty egg cases from which roaches have hatched.

Flies--There is no such thing as a clean housefly. The female fly lays her eggs in decaying matter of human or animal wastes, and the hatched offspring never seem to improve their surroundings! Flies have an amazing sense of smell, and they are attracted to any type of food or waste odors. A fly spreads germs in three ways: from its body wastes, from its feet and hairy legs, and in its manner of feeding. When eating solid food, the fly spits up a stomach fluid to dissolve the food; this fluid is highly packed with germs.

Ants--Any of the several hundred different species of ants can find their way to food. Ants eat a wide variety of food, particularly sweets and fats such as syrup and fried foods, and can easily contaminate anything they touch. Ants spread germs by carrying filth and waste to food on their legs and bodies.

RODENT PESTS

Rats and Mice--Both cause much suffering each year in illness, death, and destruction of property. When these pests are numerous, two things are certain: 1) there is an easily available supply of food, and 2) there are plenty of places for them to hide and raise their offspring. Both pests can gnaw through wood, and squeeze through suprisingly small openings. A 1/2 inch crack will admit a young rat or an adult mouse! Both dislike open spaces, and they move along walls, leaving a dark, greasy trail. They prefer to take their food into hiding, but they will eat larger items wherever these items are found. Rats and mice transmit disease by the fleas they carry on their bodies and by their urine and feces which infect food.

PANTRY PESTS

Bran Beetles--are small and brownish in color and are usually found in flour, mixes, and cereal. These beetles are often called "weevils."

Weevils--are gray or brown wedge-shaped beetles which infest dried beans and peas. The rice weevil infests rice, macaroni, noodles, and spaghetti. Adult weevils buzz and fly around lights.

Hide and Larder Beetles--have black backs, but larder beetles have a yellow band across their backs. They feed on ham, bacon, cheese, smoked meats, and organic debris which is the remains of living creatures.

Cereal Mites--are so small that they are hardly visible to the naked eye, but in large numbers, they appear to be a fluffy mass of gray powder, due to the shed skins of the living mites. These pests are commonly found in cereal and cereal products. A severe skin eruption may develop in humans handling infested products.

Flour and Meal Moths--The "worm" stage is the most destructive; it feeds in corn, wheat, flour, popcorn, dry baby foods, candy, and dried vegetables, among other things. Flour and meal moths are distinguished from pantry beetles by a webbing which they spin over and through the materials in which they live.

Silverfish and Firebrats--Silverfish are gray and about 1/2 inch long. They have no wings and run rapidly along floors, walls, and ceilings. Firebrats are tan and gray and are also unable to fly. Both hide in cracks and between layers of insulation. They feed on starchy materials, such as wallpaper paste, starched clothing, and spilled starchy food.

DESTROYING AND REPELLING PESTS

To remain free of pests, the food service establishment must take pest control measures on a regular basis. Proper sanitation and housekeeping reduce the likelihood of pest infestation, but usually these measures are not enough to completely control or eliminate all types of pests.

Professional pest control experts should handle any exterminating or repelling of any type of pest. If you see any signs of pests at your training station, report them to your supervisor immediately. Losses due to customer annoyance, unfavorable publicity, and damage from insects and rodents total several billions of dollars each year. Do not allow your training station to become a nesting place for any type of pest!

QUESTIONS:

1. Name the most common pests found in food service establishments.
2. Pests are dangerous carriers of ____________________.
3. ____________________________ are an important part of any sanitation program.
4. Pests are eliminated from storage and food service areas by ______________ ____________, __________________________, and ____________________________.
5. When signs of pests are noticed, the employee should ______________________ ______________________.

ASSIGNMENT:

I. Find out the insecticides that are acceptable according to the board of health. Why are some types banned?

GROUP WORK:

I. Compare the information for the above assignment with information obtained by other food service employees.

II. View a film on the basic rules of sanitation, handling potentially hazardous foods, controlling pests, personal hygiene, and food storage.

UNIT II-6

SANITATION

SUBJECT: Care of Furniture, Floors, and Surface Areas

TASK: 6. Clean and sanitize furniture, floors, and other surfaces in the kitchen and in the serving area.

OBJECTIVES: When you finish this lesson, you should be able to
a. explain the importance of clean tables and chairs
b. describe the procedures for cleaning various surfaces.

FURNITURE AND SURFACE AREAS

Cleanliness is necessary to preserve the appearance of furniture and to sanitize surface areas. If a customer sits on a wet or sticky chair, he will be dissatisfied. If you are assigned to dust the furniture or wipe the table tops and chair seats, remember the role of cleanliness in customer satisfaction.

What procedure should you follow to clean a table or counter? Obviously, the first step is to remove the dishes, glasses, silverware, and trash. If a cart is used for the removal of these items, use a separate pan for each item. Place silverware in one pan and dishes in another pan. Place the dishes in the pans quickly, but quietly. Using separate pans for each different item eliminates breakage.

The next step is to wipe the table or counter. Use a cloth which is clean, rinsed, and wrung out. Imagine how you would feel if someone used a dirty cloth to wipe the table or counter where you were eating. After wiping the table or counter run your hand over it to be sure that no sticky spots remain and that it is dry.

At least once a day, clean table tops and counters with a sanitizing solution. The kind of sanitizing solution used varies from one establishment to another.

Check the ash trays, salt and pepper shakers, and sugar containers and wipe these items clean, if necessary. Use a napkin to wipe the ash tray clean and shine it with a clean cloth. While you are at the table, check the chair seats, wipe them clean with a damp cloth, and dry them with a clean cloth.

Other surfaces to keep clean are windows, shelves, glass counters, pie cases, service equipment, and beverage containers. Dusty or dirty surfaces not only affect the customer's appetite but also provide opportunities for bacteria to grow as well. More customers are lost because of a lack of cleanliness than for any other reason. Be alert to the appearance of all the surfaces in the area where you work and keep them spotless!

Plan ahead when you are assigned cleaning tasks and take all the equipment you need with you. Move from one area to the next in an organized manner. If you have several different things to do, finish one task and then go on to the next.

FLOORS

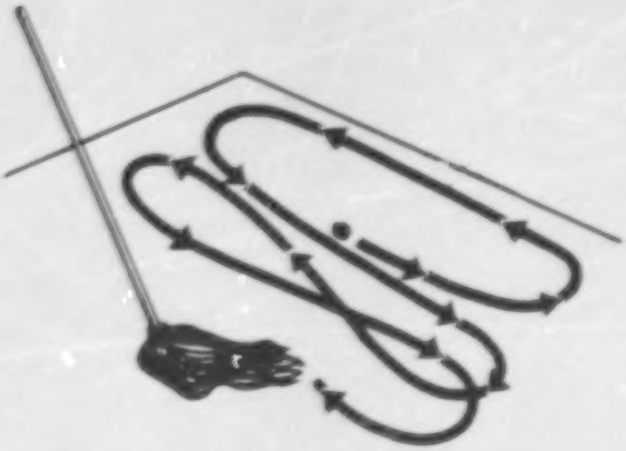
Have you noticed the floors in the food establishment where you work? Have you stopped to think about the importance of clean floors in a place where food is served? Floors must be kept clean for two reasons: safety and appearance. Floors should be checked constantly for spilled foods or other debris. Spills should be cleaned immediately--not after someone has fallen. Daily or more frequent cleaning of floors is necessary in all food service establishments. If cleaning is carefully done each day, it will not be a difficult task. The chart below gives suggested procedures for cleaning floors.

FLOOR FINISHES	CARE REQUIRED
Concrete--a hard, compact substance made of sand, gravel, cement, and water.	Scrub with neutral soap suds; rinse. Sweep regularly.
Terrazzo--small chips of marble set in cement and polished.	Scrub with neutral soap suds; rinse and mop dry. Abrasive cleaner may be used occasionally to remove heavy soil and stain. Terrazzo sealer may be applied to areas where traffic is heavy.
Ceramic Tile--a mixture of clay and water which has been baked at a high temperature. May be either glazed or unglazed.	Sweep with soft brush. Wash with neutral soap suds; leave suds on long enough to loosen soil; mop; rinse with clear, warm water; mop dry.
Rubber Tile--various types of rubber are heated and rolled out under pressure; then cut into tiles.	Sweep with soft brush. Mop with clean, lukewarm water. If soil is not removed use a small amount of ammonia or non-fat synthetic cleaner. Mop a small section at a time; rinse; dry; buff thoroughly. The more the floor is buffed, the less often it will need to be washed.
Vinyl Tile--similar to rubber tile. A type of plastic which is tough, flexible, and shiny.	Sweep with soft brush. Wash with ordinary cleaning solutions. Rinse and mop dry.
Hardwood (waxed)--oak is most commonly used. Beauty is in the grain of the wood.	Sweep with soft brush or mop free from oil, since oil tends to dissolve wax and leave a film over the surface of the floor. Remove spots by rubbing the floor with a cloth dampened with liquid wax and polish. Remove exceptionally soiled spots with steel wool and a cleaning solution. Remove wax by rubbing the floor with a cloth dampened with a prepared cleaner. Then wash the floor with mild, neutral soap; rinse with clear water; dry; rewax and polish.

FLOOR FINISHES	CARE REQUIRED
Carpet--heavy, woven or felted fabric usually with a nap or pile.	Vacuum daily. Remove spots immediately. Shampoo approximately twice a year. Reset or brush pile after shampooing.

A task can either be done in a way which takes an unnecessary amount of time and energy or in a way that takes the least possible amount of time and energy. Cleaning or mopping floors is no exception. Below are some general guides for efficient floor cleaning.

1. Use two buckets--one filled with clean warm water and one filled with water to which a synthetic detergent has been added.
2. Dip the mop into the second bucket and wring out until partially dry.
3. Start about 2 feet from the baseboard as shown in the illustration and then make a long stroke close to the baseboard. Use a figure-8 motion as you mop. To remove any stubborn spots, use the heel of the mop.



4. Mop an area about 9 x 12 feet; then rinse and dry the floor.
5. Change cleaning solution and rinse water often.
6. Clean the equipment when the job is completed and store it in specified areas.

QUESTIONS:

Fill in the blanks with the word(s) that complete(s) the statement.

1. The cloth used to wipe the table should be ______________________, rinsed, and wrung out.
2. After wiping the table, check for any remaining sticky spots by ______________________________.
3. Table tops should be cleaned with a sanitizing solution at least ______________ a day.

4. Plan ahead when you are assigned cleaning tasks and take all the ______________________ you need with you.

5. The motion to be used when mopping floors is a ______________________.

Match the letter of the type of floor to the suggestions for care of floors. Types of floors may be used more than once.

CARE

_____ 6. Remove spots with a cloth dampened with a liquid wax.

_____ 7. Use a sealer in heavy traffic areas.

_____ 8. Wash with ordinary cleaning solutions.

_____ 9. Use steel wool and a cleaning solution to remove heavy soil.

_____ 10. Use ammonia to remove soil.

_____ 11. Shampoo at least twice a year.

_____ 12. Use abrasive cleaner occasionally to remove soil and stain.

_____ 13. Leave neutral soap on floor long enough to loosen soil.

_____ 14. Never use an oil mop for dusting.

TYPES

a. Carpet

b. Concrete

c. Clay Tile

d. Hardwood

e. Rubber Tile

f. Terrazzo

g. Vinyl Tile

ASSIGNMENT:

I. Using the chart on p. 46, make a floor care chart using the floor types found in your training station. Identify the kind of floors and the procedures to use in caring for them.

GROUP WORK:

I. Compare your floor care chart with those made by other food service employees. What types of floors were most commonly found?

UNIT III-1

SAFETY

SUBJECT: Safety Precautions

TASK: 7. Use precautions necessary to avoid accidents in food preparation area.

OBJECTIVES: When you finish this lesson, you should be able to
a. evaluate yourself in terms of rules of safety applied on the job
b. identify potentially hazardous conditions.

REFERENCE: Cornelius, Ethelwyn, G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 301-310.

Food service employees who are aware of the discomforts and waste resulting from accidents help others as well as themselves to develop safe work habits. Careless attitudes toward "safe" practices among employees may be classified into three general groups:

1) Those who do not understand the dangers in their unsafe acts.
2) Those who do not take necessary precautions.
3) Those who are physically defective in eyesight, hearing, or muscular control.

Accidents result from unsafe acts or unsafe conditions. An injury always results from one or a combination of these factors. Injuries due to unsafe conditions can be definitely and permanently eliminated. On the other hand, unsafe acts involve human beings and are never entirely eliminated. Unsafe acts which cause accidents are often a result of failure to follow instructions, to use equipment properly, to control your temper, or to rest adequately. Have you failed in any of these?

The food service employee must develop special attitudes as well as skills to do his job the safest way without stopping to think about it. Make safe work procedures a habit. Three simple steps which help in establishing safety habits are:

1) Start the job right by learning safe habits.
2) Practice the right habits.
3) Never fall back into old habits of carelessness.

In food service establishments, the most common accidents are cuts, burns, falls, and injuries resulting from fires and explosions. Because food preparation and service involve the use of glass, hot liquids, sharp instruments, power-operated equipment, and hot cooking surfaces, employees constantly work under hazardous conditions.

When an employee is seriously injured, the result is pain, suffering, and lost job time. This means lost income! So, remember, your own safety is up to you!

SAFETY PRECAUTIONS

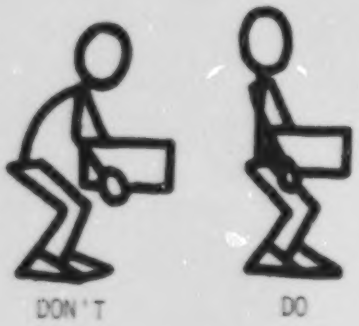
To Prevent Electrical Shock:

1. See that electric cords are in good repair.
2. Always dry your hands before touching electrical equipment.
3. When plugging in anything electrical, plug the cord into the equipment or appliance first, and then into the electric outlet. When removing the plug, reverse the order: remove the plug from the electric outlet first; then remove the plug from the appliance.
4. Be extra careful when using anything electrical near water.

Refer to Food Service Careers for other safety precautions to prevent slips, falls, cuts, burns, fires, and strains.

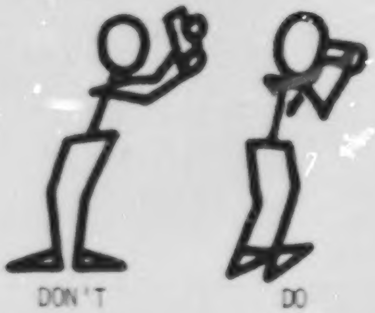
BODY MECHANICS

Lifting heavy containers of food or ingredients may lead to injuries if the lifting is not done correctly. To lift the right way, place your feet about twelve inches apart, squat close to the object to be lifted, keep your back as straight as possible, and lift by pushing up with your leg muscles.



While carrying objects, keep the load close to the body. Never carry loads so high that vision is blocked. Put the load down by reversing the procedure used to lift it.

If a task requires turning from one direction to another, be sure to turn, not twist, your body. Constant twisting pulls the back muscles and may strain them. Pivot with your feet and turn.



WHAT TO DO IN CASE OF ACCIDENTS

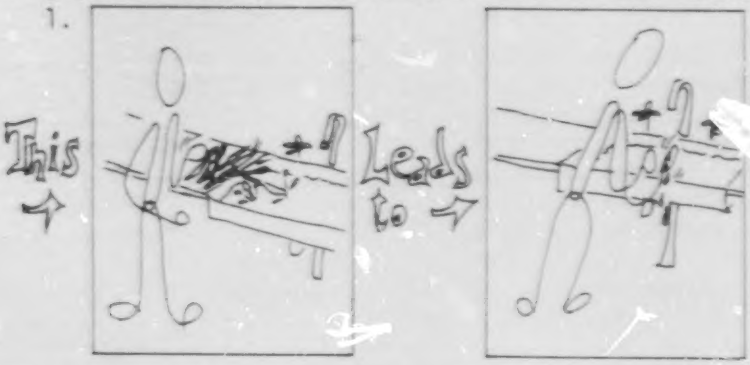
When an employee has an accident, he should receive immediate care. First, the accident should be reported to the supervisor, who will probably send the employee to the first aid station; or if the accident is serious, he will probably send the employee to a doctor or call an ambulance. Small cuts, burns, or bruises should be cared for immediately.

An employee may leave his work station to find first aid, if necessary. The food service employee should do his part to guard against accidents, but in case an accident occurs, he should seek aid for any type of injury suffered.

QUESTIONS:

What safety precaution is illustrated in each of the following diagrams?

1.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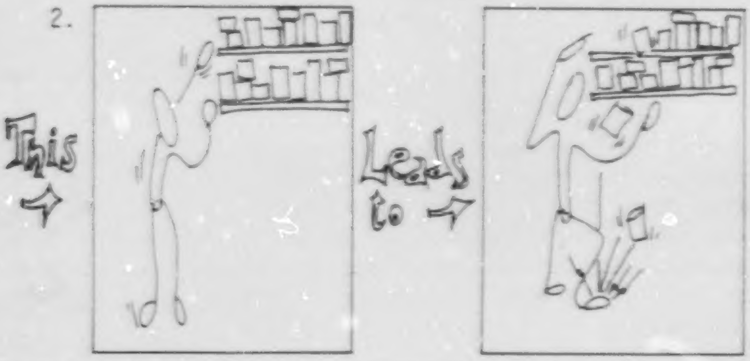
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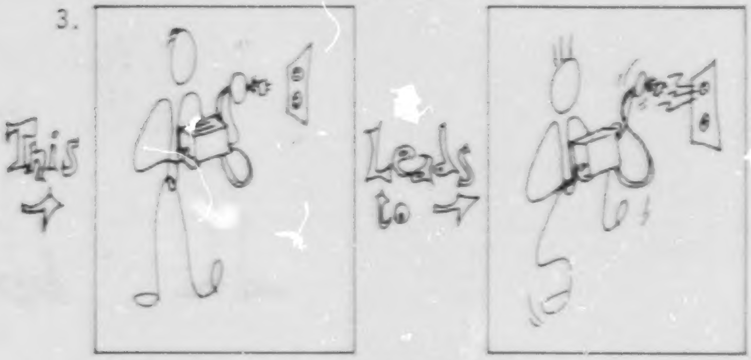
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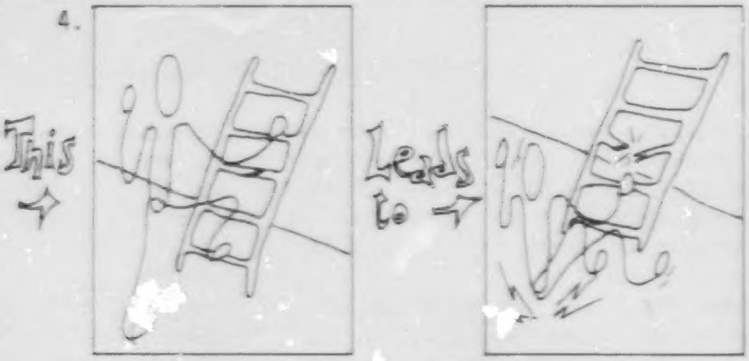
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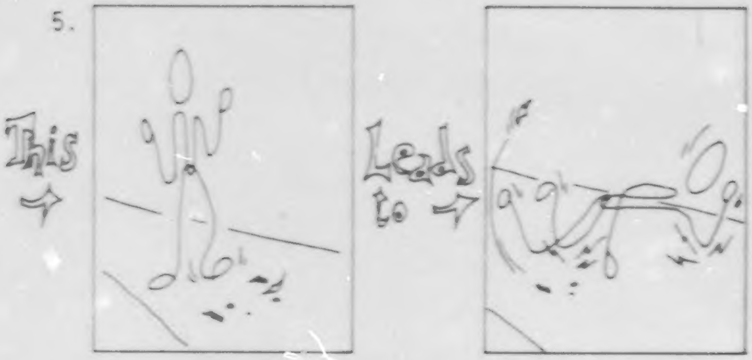
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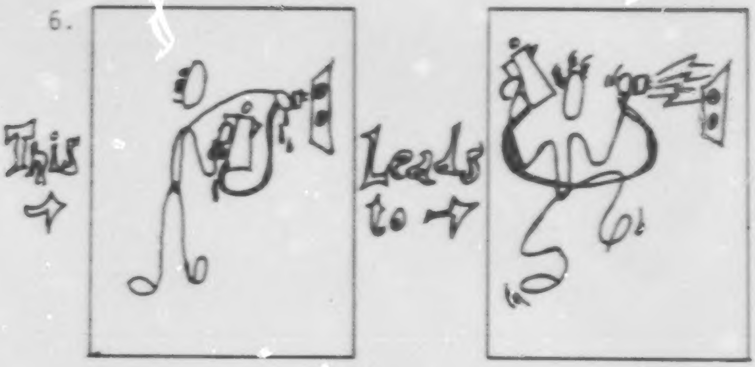
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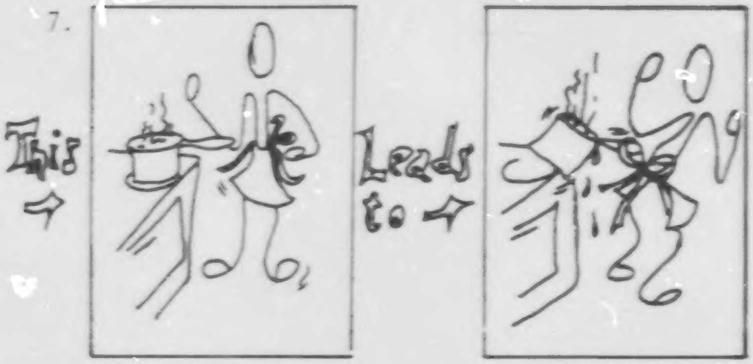
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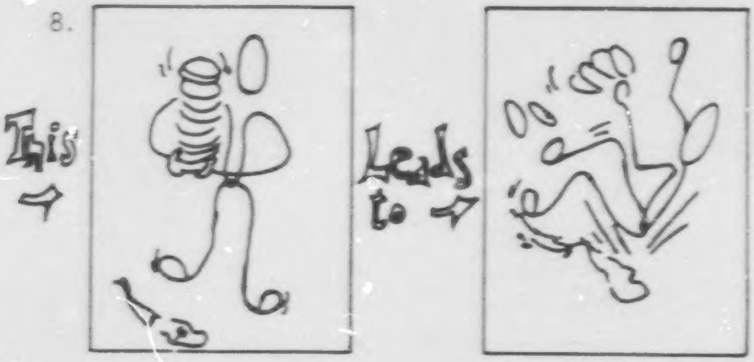
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9. The steps in establishing safety habits are ____________________________,
______________________________, and ____________________________________.

10. Food service employees are protected by built-in safety features such as
____
____.

11. "Accident-prone" refers to ____
____.

12. The most common food service accidents are ___________________________,
____________________, ____________________, and ____________________.

13. Weariness from labor or exertion affects safety; this weariness is called
______________________________.

ASSIGNMENTS:

I. Make a check list of the safety precautions that might be useful to you at your training station. From observations in your work area, add other precautions to your list which apply specifically to your work.

II. Make safety posters identifying potentially hazardous conditions in the food service area. Display posters during National Safety Week.

III. Locate first aid supplies in or near your training station. Learn how to use first aid supplies for small cuts, burns, and bruises. Who should you notify at your training station when a serious accident occurs?

IV. Write to the United States Department of Labor, to the Occupational Safety and Health Administration in Washington, or to the local Health, Education, and Welfare office for a copy of the Williams--Steizer Occupational Safety and Health Act of 1970. (This act is also known as OSHA.) Prepare a report to present to the class on the purpose of this act. In the report include information on the violations, fines, inspections, and standards for occupational safety and health.

GROUP WORK:

I. In small groups, role play situations demonstrating good and poor safety habits. Example: One person role plays as the narrator says, "If Molly follows this procedure, she may ...."

II. Demonstrate the correct way to lift a heavy carton.

UNIT III-2

SAFETY

SUBJECT: Fire Safety

TASK: 8. Follow appropriate emergency procedures.

OBJECTIVES: When you finish this lesson, you should be able to

- a. identify kinds of fires
- b. explain fire emergency procedures
- c. describe correct use of fire extinguisher.

Serious fires occur so often in food service establishments that every employee should understand fire safety and know what to do in case of a fire. Injuries often occur because people panic or become confused.

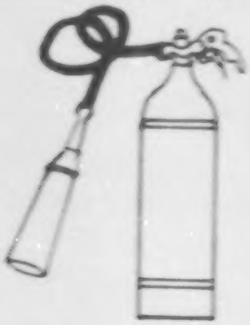
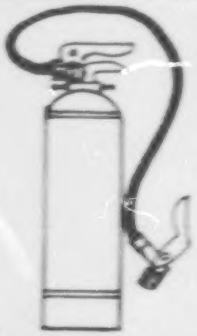
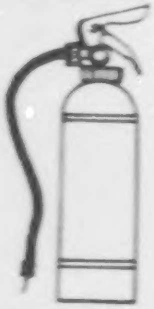
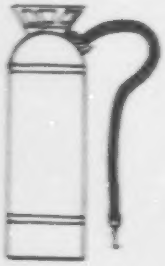
Fire safety is the responsibility of each employee. All employees should become familiar with the rules to follow in case of fire in their place of employment. Employees should also know the location of all exits in the areas where they work. Knowing where the nearest fire extinguisher is located and knowing how to operate it saves precious minutes when a fire occurs.

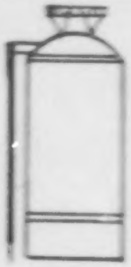
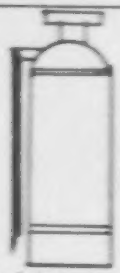
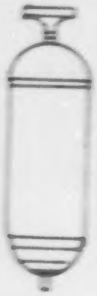
If a fire occurs, follow the emergency fire procedures for the place where you are employed. Pull the nearest fire alarm box. Alert other employees. Assist customers to safety. Report to the fire department the exact location and type of fire.

The most common places fires occur in food service establishments are in or around deep fat fryers, ranges, and broilers. Thoroughly cleaning these pieces of equipment helps to prevent fires. A container of baking soda, easily accessible, enables the cook to put out a minor grease fire on the range or on other equipment. If a grease or oil fire occurs in a pan, place a cover over the pan and turn the heat off. Never use water on a grease fire because water will spread the fire.

Food service employees should become familiar with the operation of the fire extinguisher located near their work area. Different types of fire extinguishers should be used for different kinds of fires. Using the wrong type of fire extinguisher may make the situation even worse.

FIRE EXTINGUISHERS

Fire Extinguisher	Contents	Use	Operation
 Carbon Dioxide (CO2)	Liquid carbon dioxide under pressure	Electrical fires or burning liquids where a smothering action is needed	Carry to fire, pull pin on side of handle, and open valve. Hold by insulated handle. Squeeze handle grip and direct discharge from horn to base of fire. Discharge range is 6 to 8 feet. A 15 pound size lasts about 42 seconds.
 Dry Chemical	Bicarbonate of soda, dry chemicals and cartridge of carbon dioxide gas	Live electrical fires; wood, paper, excelsior, and other ordinary combustable materials	Carry to fire, pull pin, and open valve (or press lever). Squeeze handle grip and direct discharge to base of fire. Discharge range is about 14 feet. A 30 pound size lasts 22 to 25 seconds.
 Pressurized Water	Plain water	Paper, wood, excelsior, cloth, and general combustible fires requiring cooling and quenching	Carry to fire, squeeze handle grip, and direct discharge to base of fire. Discharge range is 30 to 40 feet. A 2 1/2 gallon size lasts 50 to 55 seconds. Do not use on burning liquids or live electrical fires; it will spread the fire or cause a deadly shock.
 Soda-Acid	Bicarbonate of soda solution and sulfuric acid	Paper, wood, excelsior, cloth, and general combustible fires requiring cooling and quenching	Carry to fire, turn bottom up, and direct discharge to base of fire. Discharge range is 30 to 40 feet. A 2 1/2 gallon size lasts 50 to 55 seconds. Do not use on burning liquids or electrical fires; it will spread the fire or cause a deadly shock.

Fire Extinguisher	Contents	Use	Operation
 Foam	Aluminum sulfate and bicarbonate of soda	Grease, oil, gasoline, and paint fires	Carry to fire, turn bottom up, and direct discharge to base of fire. Discharge range is 30 to 40 feet. A 2 1/2 gallon size lasts 50 to 55 seconds.
 Gas Cartridge	Water and cartridge of carbon dioxide gas	Wood, paper, textile fires, gasoline, oil, anesthetics, or organic solvents	Carry to fire, turn bottom up, bump, and direct discharge to base of fire. Discharge range is 30 to 40 feet. A 2 1/2 gallon size lasts 50 to 55 seconds.
 Vaporizing Liquid	Carbon tetrachloride and other chemicals	Live, electrical fires	Carry to fire, turn handle, pump by hand, and direct discharge to base of fire. Discharge range is 20 to 30 feet. A 1 quart size lasts 40 to 45 seconds.

QUESTIONS:

1. The most common sources of fires in food service establishments are ____________________, ____________________, and ____________________.

2. ____________________ may be used by the cook to put out minor grease fires.

ASSIGNMENT:

1. Find out what kind of fire extinguishers are used in your place of employment. Describe the kind of fires each will extinguish and how to use each extinguisher.

GROUP WORK:

1. Compare the fire extinguishers used at your place of employment with the fire extinguishers used at other training stations. Which types of fire extinguishers are most commonly used in food service establishments?

UNIT IV-1

NUTRITION

SUBJECT: Factors Influencing Eating Behavior

TASK: 9. Use nutrition information in planning, preparing, and serving meals for persons of various ages.

OBJECTIVES: When you finish this lesson, you should be able to

a. explain the effects of emotions on eating habits
b. describe factors contributing to food habits and customs
c. distinguish between food fads and food fallacies
d. analyze the effects food fads and food fallacies may have on one's health.

REFERENCES: Cornelius, Ethelwyn G. *Food Service Careers*. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 148-151.

Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. *Family Meals and Hospitality*. New York, New York: Macmillan Publishing Co., 1972. pp. 8-10.

Food provides the body with the fuel it needs to function properly. Just as an engine cannot run without fuel, neither can the body function without food. An engine runs longer and better with proper types and amounts of fuel. The body also operates longer and more efficiently if provided with the amounts and types of food it needs.

Because people have both physical and emotional needs, people sometimes eat even though their bodies do not need the fuel. Emotional stress sometimes causes a person to eat in an effort to overcome unhappiness or nervousness. Food can also serve as a substitute for security, acceptance, or love. If food is used frequently as a substitute for other needs, health and vitality suffer.

Understanding the effects of emotions on eating habits is helpful in working with people in a food service establishment, hospital, nursing home, school, or day care center. Many times a person may refuse food or complain about it in order to gain attention. The wise employee shows patience and understanding in working with such persons.

FOOD HABITS AND CUSTOMS

Families have different customs concerning meals and various foods. Cultural background largely determines food customs and practices. When working with people of different ethnic groups and economic levels, try to become acquainted with their food practices and customs. If their beliefs cannot be adhered to, try to show interest and understanding about their past routines.

Customs regarding the morning meal vary considerably. Some families completely skip breakfast; others eat a complete meal; still others eat anything that strikes their fancy.

Another custom that may vary is the time of day "dinner" is served. Some families have "dinner," the largest meal of the day, at noon. Others serve dinner in the evening.

Even the time for meals varies considerably. For example, some families eat early in the evening, whereas others eat quite late. Also, some families eat meals together while others eat individually at different times.

No matter how people differ in cultural or economic backgrounds, they have the same basic needs for nutrition. Knowledge of various customs is an aid to working effectively with people.

FOOD FADS AND FALLACIES

Whether in a restaurant, cafeteria, school, hospital, nursing home, or other business, people must know that the food they buy and eat is safe and wholesome. They expect a fair price when they purchase the food. They also expect honesty in advertising, labeling, and packaging of the foods. The majority of businessmen are ethical (honest and conforming to a standard of right behavior). However, there are a number of types of fraudulent (mis-representing or trickery) and deceptive schemes used by dishonest salesmen and businessmen.

Fraudulent schemes are less likely to influence food service employees who are aware of the approaches used in the promotion of these schemes. A fad food is said to have "magical" powers. It is often used over both long and short periods of time and is used regularly and faithfully. A food fallacy refers to claims about food based on unreliable information that has no scientific support. A fad diet is not based on sound nutrition. It is a "short-cut" to losing weight. Although short-term results are often obtained, a fad diet can be harmful because it deprives the dieter of necessary nutrients.

Everyone must learn to distinguish between facts and fads in products and information available. Food quackery is one method that takes advantage of people. Operating primarily in the area of fad diets, the quack usually claims to have special foods, vitamins, formulas, gadgets, utensils, gimmicks, and literature to sell. The quack claims these "special" foods will steady your nerves, cause weight loss, and cure cancer, diabetes, arthritis, and most other illnesses. Quacks tend to attack the suffering patient and those who want to lose weight. They not only cause a tremendous waste of money, but they may also endanger the lives of their followers.

The "scare technique" is one method often employed by faddists and quacks in promoting the sale of health foods. They take the truth and twist it until the buyer feels his life depends on the product. They actually "scare" the customer into purchasing the product.

The only answer to the problem of quacks and faddists is education. People of all ages should understand basic nutritional needs and the need for competent medical care. The food service employee needs an understanding of fads and fallacies in order to work with people who believe them. The food service employee's understanding must be clear enough that nutritional substitutes can be suggested for incorrect ideas. The food service employee must also recognize the strong emotional dependence people have on these fads and proceed carefully when a patient or customer has such feelings.

QUESTIONS:

1. A substitute often used for security, acceptance, or love is ____________.

2. Families develop certain eating habits as part of their ______________.

3. Claims about food based on unreliable information that has no scientific support is referred to as a ______________________________.

4. A food said to have "magical powers" and usually used regularly and faithfully over both long and short periods is referred to as ____________.

5. A diet that is not based on sound nutrition is a ____________________.

ASSIGNMENT:

I. Identify the ethnic groups served in your training station. Find out more about the food habits of persons in these groups by doing reading in the library, interviewing persons in these ethnic groups, and discussing food habits of each ethnic group with your training sponsor.

GROUP WORK:

I. In small groups, discuss customs of various ethnic groups found in readings or interviews.

II. Role play this situation:
"A patient, age 68, is in the hospital for the first time. You are in charge of helping serve his meals. Because the schedule and meals are different from those to which he is accustomed, he is very unhappy."
How would you handle this situation?

III. Give examples of situations in which you have seen food substituted for: love, security, acceptance. Share examples with other food service employees.

IV. Make up situations in which the following persons refuse to eat. Discuss different ways you could handle the situations.
a. An elderly patient in a hospital
b. A four year old child at a day care center
c. A teenage patient in a hospital
d. An elderly person at a rest home
e. A customer in a restaurant who says the food is "not worth eating"
Compare your solutions with those of other food service employees.

V. Discuss situations that reflect food habits and customs of customers which students may have met on the job. Evaluate how each handled the situation and let class members suggest different solutions.

VI. Discuss different fad diets or food fallacies which persons at different training stations have revealed. Discuss factors which contribute to belief in these fad diets or food fallacies.

UNIT IV-2

NUTRITION

SUBJECT: The Basic Four Food Groups

TASK: 9. Use nutrition information in planning, preparing, and serving meals for persons of various ages.

OBJECTIVES: When you finish this lesson, you should be able to
- a. name the Basic Four food groups
- b. identify foods in each food group
- c. describe the number of servings needed daily from each food group
- d. evaluate diets using the Basic Four food groups as a guide.

REFERENCES: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 146-148, 176.

Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. Family Meals and Hospitality. New York, New York: Macmillan Publishing Co., 1972. pp. 5-7.

To help individuals choose foods wisely, government nutrition experts have divided foods into four groups. If a person chooses daily from these four groups, called the Basic Four, his diet provides plenty of nutrients for energy, growth, and body repair.

The food service employee needs to understand the Basic Four. Knowledge of the Basic Four aids in meal planning, preparation, and service. The number of servings of various foods, as well as substitutes for foods within each group, serves as a guideline in planning meals. Nutritious snacks can also be based on the four food groups.

The four food groups should also serve as a guide for personal eating habits. To be successful on the job, a person must maintain good personal health and a high level of energy. The best way to do this is to follow the Basic Four in personal eating habits. A person who eats a balanced diet feels good; therefore, he does a better job.

The Basic Four food group is illustrated in Family Meals and Hospitality, page 6. The foods included in each group of the Basic Four and recommended amounts to count as a serving are given below.*

MILK GROUP

Includes:

Milk--fluid whole, evaporated, skim, dry, buttermilk
Cheese--cheddar, natural or processed, cottage, cream
Ice cream

---

*Adapted from United States Department of Health, Education, and Welfare. A Guide to Nutrition and Food Service for Nursing Homes and Homes for The Aged. Washington, D.C.: United States Government Printing Office, 1971. pp. 16-19.

Recommended Amounts:

2 or more 8-ounce cups daily for adults; 4 or more 8-ounce cups for teenagers; and 3 or more 8-ounce cups for children (6-ounce cups for some children under 8). Cheese and ice cream may replace part of the milk. The amount needed to replace a serving of milk is figured on the basis of calcium content. The following scale shows (in terms of calcium) the equivalent portions of cheese and ice cream to those of milk.

1-inch cube cheddar cheese = 1/2 cup milk
1/2 cup cottage cheese = 1/3 cup milk
2 tablespoons cream cheese = 1 tablespoon milk
1/2 cup ice cream = 1/4 cup milk

MEAT GROUP

Includes:

Beef, veal, lamb, pork, and variety meats such as liver, heart, and kidney
Poultry and eggs
Fish and shellfish
As alternates, occasionally: dry beans, dry peas, lentils, nuts, peanuts, peanut butter

Recommended Amounts:

2 or more servings every day.

Count As a Serving:

2 to 3 ounces of lean cooked meat, poultry, or fish (all without bone)
2 eggs
1 cup cooked dry beans, dry peas, or lentils
4 tablespoons peanut butter

VEGETABLE AND FRUIT GROUP

Includes:

All vegetables and fruits. Those valuable as sources of vitamins C and A are emphasized.

Recommended Amounts:

4 or more servings daily, including servings from the following three categories.

1. One serving of a good source of vitamin C or two servings of a fair source.

GOOD SOURCES OF VITAMIN C

Grapefruit
Grapefruit juice
Orange
Orange juice
Cantaloupe
Mango
Papaya
Raw strawberries
Broccoli
Brussels sprouts
Green pepper
Sweet red pepper

FAIR SOURCES OF VITAMIN C

Honeydew melon
Lemon
Tangerine
Tangerine juice
Watermelon
Asparagus tips
Raw cabbage
Collards
Garden cress
Kale
Mustard greens
Potatoes, white and sweet, cooked in the jacket
Spinach
Tomatoes
Tomato juice
Turnip greens

2. One serving, at least every other day, of a dark-green or deep-yellow vegetable or the fruits named below for vitamin A.

Apricots
Broccoli
Cantaloupe
Carrots
Chard
Collards
Garden cress
Kale
Mango
Persimmon
Pumpkin
Spinach
Sweet potato
Turnip greens and other dark-green leaves
Winter squash

3. Choose the remaining servings, to make a total of at least 4 servings for the day, from this list of other vegetables and fruits; or choose additional servings from the above lists of fruits and vegetables.

Asparagus
Beans, snap, green
Beets
Beans, lima
Cabbage, cooked
Cauliflower
Celery
Corn, sweet
Eggplant
Lettuce, head
Onions
Parsnips
Peas, green
Potato, Irish
Rhubarb
Rutabagas
Cherries
Grapes
Sauerkraut
Squash, summer
Turnips
Apples
Bananas
Berries
Peaches
Pears
Pineapple, canned
Pineapple juice, canned
Plums
Prunes
Raisins

Count As a Serving:

1/2 cup of a cooked vegetable or fruit or juice, 1 cup of a raw vegetable such as a salad, or a portion as usually served, such as 1 medium apple, banana, orange, or potato; 1/2 of a medium grapefruit or cantaloupe; or the juice of 1 lemon.

BREAD AND CEREAL GROUP

Includes:

All breads and cereals that are whole grain, enriched (vitamins and minerals added in processing to improve nutritive value), or restored (nutrients lost during processing are replaced).

Breads
Cooked cereals
Ready-to-eat cereals
Cornmeal
Crackers
Flour
Grits
Macaroni
Spaghetti
Noodles
Parboiled rice and wheat
Rice
Rolled oats
Quick breads and baked goods if made with whole-grain or enriched flour

Recommended Amounts:

4 or more servings daily.

Count As a Serving:

1 slice of bread
1 ounce or 3/4 cup dry, ready-to-eat cereal
1/2 to 3/4 cup cooked cereal, cornmeal, grits, macaroni, noodles, rice, or spaghetti

QUESTIONS:

For each food listed locate the food group in which it is found. Place the letter corresponding to your choice in the blank to the left of each food. The letters are used more than once.

FOOD

_____ 1. Cottage cheese
_____ 2. Lentils
_____ 3. Liver
_____ 4. Broccoli
_____ 5. Rolled oats
_____ 6. Poultry
_____ 7. Ice cream
_____ 8. Noodles
_____ 9. Cabbage
_____10. Flour

FOOD GROUP

a. Bread and Cereal Group
b. Meat Group
c. Milk Group
d. Vegetable and Fruit Group

11. The number of servings recommended daily for the Milk Group are:

12. The number of servings recommended for the Bread and Cereal Group are:

13. The number of servings recommended for the Meat Group are:

14. The number of servings recommended for the Vegetable and Fruit Group are:

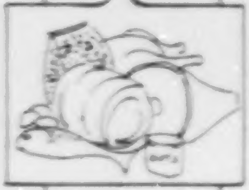
15. The job of choosing the best foods daily for good health is simplified by use of the _______ ________________________________.

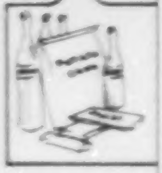
ASSIGNMENTS:

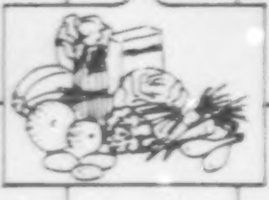
I. On your answer sheet, draw a chart similar to the example and record under the correct food group the number of servings you eat at each meal during the next three days. Do not change your regular diet habits (omit weekends).

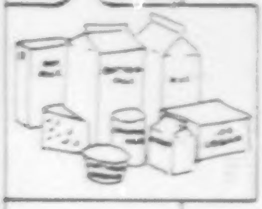
INDIVIDUAL DIET STUDY

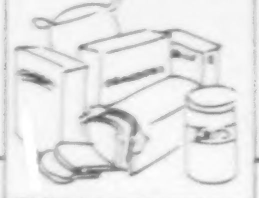
DAY	Milk and Milk Products	Meat, Fish, Eggs, Dried Beans, Peas	Fruits and Vegetables	Breads and Cereals	Empty Calories
First					
Breakfast:					
Lunch:					
Dinner:					
Snack:					
Total Servings:					
Second					
Total Servings:					
Third					
Total Servings:					











II. Review your diet study. Record the number of servings you ate each day under the appropriate group. Turn this in to your teacher.

FOLLOW-UP CHART

Day	Milk and Milk Products	Meat, Fish, Eggs, Dried Beans, Peas	Fruits and Vegetables	Breads and Cereals	Empty Calories
First					
Second					
Third					

Use the Basic Four food groups to analyze your diet study. Answer the following questions.

1. a. In which food groups did you have the recommended number of servings?

   b. In which food groups were you lacking the recommended number of servings?

2. Make suggestions or develop a plan for improving your diet by:
   a. listing foods which need to be added to your diet.
   b. reducing excessive calories or empty calories.

III. Prepare a poster illustrating the Basic Four food groups. Include number of servings needed. Ask your training sponsor if you may display it at your place of employment. If not, display it in the classroom.

GROUP WORK:

I. In small groups, plan a day's menu for each of the following situations. Use the Basic Four food groups as a guide in planning the menus.
   a) Children at a day care center
   b) The teenagers in your class
   c) Elderly patients in a nursing home

   Compare menus with other groups.

II. Participate with other food service employees in a role play situation called "Judge and Jury." List the foods you ate yesterday for breakfast, lunch, dinner, and snacks. Select the following characters for the role play: judge, jury, defense attorney, district attorney, defendant, and witnesses. The judge reads the charges against the defendant. (Example: The defendant is accused of eating ____________.) The defense attorney pleads the defendant's case, explaining why he planned as he did. The district attorney points out ways the defendant disobeyed the law of the Basic Four food groups. The jury must decide the case using the following criteria: required servings eaten in all four of the food groups = acquittal; three of the groups = warning; two of the food groups = two-year sentence; one of the food groups = three-year sentence; none of the food groups = life sentence.

III. With other food service employees, play a game using cards with pictures or words representing various foods which may be eaten during a day. Each player is dealt nine cards. Of the remaining cards, turn the top card face up and lay it on the table to represent a discard pile; place the other cards remaining in the stack face down along side the discard pile. Each player in turn draws one card and discards one card face up; the player may choose to draw the top card in the stack or the top card in the discard pile. The object of the game is to collect cards representing foods to be included in two proposed menus, one for dinner and one for either breakfast or lunch, meeting the requirements of the four food groups. When a player has two complete menus, the player places his cards face up, and the group determines whether or not the menus are satisfactory. From cards held by all players, the group then plans the menu for the remaining meal to complete the number of servings required daily in each of the four food groups.

UNIT IV-3

NUTRITION

SUBJECT: Nutrients

TASK: 9. Use nutrition information in planning, preparing, and serving meals for persons of various ages.

OBJECTIVES: When you finish this lesson, you should be able to
a. identify nutrients
b. describe the functions of nutrients in the body
c. relate nutrients to specific food sources
d. summarize the importance of water in the body
e. explain that nutrients are essential for human health.

REFERENCE: Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. Family Meals and Hospitality. New York, New York: Macmillan Publishing Co., 1972. pp. 24-39.

WHAT ARE NUTRIENTS?

The body needs nutrients because they nourish the body. Nutrients are chemical substances found in food. Each nutrient has a specific use in the body. Nutrients build and repair body tissues, furnish heat and energy to the body, and regulate body processes. The nutrients needed by the body include proteins, carbohydrates, fats, vitamins, and minerals.

The body must also have an adequate supply of water. Although it is not considered a basic nutrient, the average person needs six to eight glasses of water each day. Water makes up most of the blood in our bodies which carries nutrients to the cells of the body. Water aids digestion and absorption of food, regulates body temperature, lubricates moving parts of the body, and aids in the elimination of body wastes.

Cooking principles and techniques are especially important in preserving nutrients in foods. To cut down on the loss of nutrients in foods, you must follow the correct storage and refrigeration practices, control cooking time and temperature, and use covered cooking utensils and a moderate amount of water.

QUESTIONS:

1. The science of relating food to growth and health is ____________________.
2. Proteins, carbohydrates, fats, vitamins, and minerals are called ________.
3. The primary purpose of protein is ____________________________________.
4. Nutrients manufactured in plants containing large amounts of sugar and starch are ____.

5. Each protein is composed of hundreds of small molecules called ______________________________.

6. Nutrients from plant and animal sources providing the most concentrated source of energy are ______________________________.

7. Vitamins A, D, E, and K are called ______________________________.

8. Bile salts, which are necessary for digestion, are formed with the aid of ______________________________.

9. Nutrients from animal products such as meat, poultry, cheese, milk, fish, and eggs are referred to as ______________________________.

10. Inorganic salts that aid in building the bony framework of the body are ______________________________.

11. Vitamins which dissolve in liquid solution are ______________________________.

12. Minerals found in minute quantities in the body are referred to as ______________________________.

13. An effective way to provide iodine in the body and to prevent goiter is the use of ______________________________.

14. Something not considered a basic nutrient but which is necessary for good health is ______________________________.

15. Lack of sufficient food and essential nutrients in the diet results in ______________________________.

For each function, locate the nutrient associated with it. Place the letter corresponding to your choice in the blank to the left of each function.

Function

_____16. Helps eyes adapt to darkness; promotes unblemished skin

_____17. Prevents goiter; needed for proper functioning of thyroid gland

_____18. Builds strong, straight bones; helps in the clotting of blood; contributes to strong teeth and normal heartbeat

_____19. Helps blood to clot

_____20. Contains sugar and starch which is changed into a form usable as energy

_____21. Helps the body use calcium and phosphorus for strong bones and teeth

Nutrient

a. Calcium
b. Carbohydrates
c. Iodine
d. Iron
e. Phosphorous
f. Protein
g. Vitamin A
h. Vitamin B Complex
i. Vitamin C
j. Vitamin D
k. Vitamin E
l. Vitamin K

_____22. Furnishes building materials for growth and repair of body tissues
_____23. Aids normal red blood cell formation
_____24. Builds red blood cells
_____25. Helps burn food in the body; prevents beriberi
_____26. Builds bones and teeth; aids in clotting of blood
_____27. Helps to form healthy gums and teeth

ASSIGNMENT:

I. Prepare a "word-a-gram" using water and the nutrients. Below is an example using states: (Try to use all of the nutrients.)

```
                            N
U N I T E D         S T A T E S
      E                     W
      X
      A R K A N S A S       M
      S             O       E
                    U       X
                    T   A R I Z O N A
                    H       C
                        F L O R I D A
                    D
                    A
                    K
                    O
                    T
                    A
```

GROUP WORK:

I. Prepare a crossword puzzle using the basic nutrients. Prepare an answer sheet. Exchange puzzles and work puzzles of classmates. Check answers by the answer sheets.

II. Play Jeopardy with food service employees. Place a small bell on the desk. Divide into two teams. The leader calls out answers about the nutrients. The first person in line must run up, ring the bell, and give the answer in the form of a question. Example: Leader says, "Helps blood to clot." Team member would answer, "What is Vitamin K?" Students may confer with team members before ringing the bell, but they must answer immediately after ringing. The leader should repeat the questions for reinforcement.

UNIT IV-4

NUTRITION

SUBJECT: Nutrition for Persons of Various Ages

TASK: 9. Use nutrition information in planning, preparing, and serving meals for persons of various ages.

OBJECTIVES: When you finish this lesson, you should be able to
a. describe the nutritional needs of persons of virious ages
b. summarize factors that determine an individual's need for food.

REFERENCE: Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. Family Meals and Hospitality. New York, New York: Macmillan Publishing Co., 1972. pp. 12-21, 112-118.

Activities, size, age, and stages of growth dictate an individual's need for food. The quantity of food needed is measured in terms of energy (calories or joules). Building materials needed consist of proteins and minerals, especially calcium, phosphorus, magnesium, and iron. Vitamins are necessary to help our body use food for energy.

Energy needs of the body increase with body size and with activity. The functioning of internal organs and maintaining muscle tone represents the minimum amount of energy needed. Minimum energy needs are approximately 1,700 calories in a young man and 1,400 calories in a young woman. Activities may increase energy needed by several hundred calories.

Baby and Mother

Pregnancy causes hormone changes, increased basal metabolism (rate at which food is used by the body), increased fluid retention, increased absorption of certain nutrients, and changes in the digestive system. Weight gain should be gradual and controlled, averaging about 20 pounds for most women.

The National Research Council recommends an increase in the consumption of protein, calcium, phosphorus, and folic acid during pregnancy. More vitamin D is also needed because of its relation to mineral absorption and utilization. The present recommended amount of iron is 18 milligrams per day.

A diet suitable for a woman during pregnancy includes two servings of meat, poultry, or fish; one egg; two green vegetables; two other vegetables; four slices of bread; one cup of breakfast cereal; one or more fruits; three cups of milk; and other foods if they are needed for energy.

The main difference between a pregnant woman's diet and that of her family is that she needs more milk and iron-rich foods. A good basic diet can supply the nutrients needed during pregnancy. However, most doctors prescribe vitamin or mineral supplements during pregnancy.

The newborn infant needs higher levels of all nutrients in relation to his size than at any other age. This need is due to the infant's rapid growth and higher metabolic rate. Energy requirements of infants vary according to their size and activities.

Commercially-prepared formula or evaporated milk is generally used for feeding infants instead of fresh milk. A common formula using evaporated milk requires 3 ounces evaporated milk, 7 ounces water, and 1/2 ounce cane sugar. A supplement of 35 milligrams of vitamin C should be given daily. If vitamin D has not been added to the milk, 400 International Units should be given daily.

The Growing Child

When the child learns to chew, it is no longer necessary to strain or mash his food. Striving toward independence, the child likes to help with his hands. He may also have a smaller appetite. Parents often resort to pleading, bribing, scolding, or threatening the young child to get him to eat.

When working with children, make mealtime pleasant and routine. Have patience, but maintain complete control at all times. If a child misbehaves to the extent of disrupting the meal, he should be removed from the table and disciplined elsewhere.

If a child refuses to eat, offer food at mealtime without comments on the desirability of the food. After about 20 minutes, remove the plate and offer nothing else until the next meal. After the second or third day, even the most stubborn child will give in.

Amounts of nutrients needed by a preschool child are similar to those for a baby, although slightly higher. A suggested diet for a preschool child consists of 3 servings of vitamin D milk; 2 ounces of lean meat, fish, or poultry; 1/2 cup orange juice or some source of vitamin C; 1 egg; 2 slices of enriched bread or other cereal; 1/2 cup cooked yellow or green leafy vegetable. These amounts should be supplemented with other fruits, vegetables, butter or margarine, cereals, and simple desserts. The rest of the diet should not consist of "empty calorie" foods such as soft drinks and candy.

Preadolescents

The elementary age child needs more food than the younger child. This is a good time to encourage a child to try new and different foods. Good eating habits should be stressed during this time. Along with three servings of milk, the amounts of meat, bread, fruit, and vegetables should be increased as his appetite dictates.

Adolescents

Adolescence, occuring between the ages of 10 and 20 years, is a period of rapid growth and maturation. The formation of muscles, bone, and blood requires ample supplies of the building materials: protein, calcium, and iron. Because of an increase in activity and a rise in basal metabolism, adolescents consume more food.

A suggested diet for an adolescent boy consists of 4 cups of milk; 6 ounces of meat; 1/2 to 1 cup of orange juice; 4 slices of bread; 1/2 cup of a green or yellow vegetable; enriched cereals, fruits, and vegetables. Ice cream, peanut butter cookies, and other nutritious snacks may complete the diet. The suggested diet is similar for a teenage girl, although she may consume only 3 cups of milk. A teenage girl needs more iron-rich foods than a teenage boy.

The overweight adolescent needs the same kinds of foods as others, but in smaller amounts. Instead of a "crash diet," the goal should be to develop eating habits which the adolescent can live with indefinitely.

Adults

As growth ends and maturity is reached, the need for building materials declines, as does basal metabolism. Compared with adolescents, an adult has a lower need for protein and calcium; therefore, 2 cups of milk is usually sufficient. An adult womin needs more iron-rich foods than an adult man.

The major nutritional problem at this stage is weight control. A person should maintain his normal weight at age 25 for the rest of his life. As one adds years, he needs to subtract calories. In choosing foods, a person needs to include meats, fruits, vegetables, milk, cereals, and bread. Things to avoid include pastries, rich cakes, gravies, nuts, candies, sugar, soft drinks, alcoholic beverages, and fried foods.

Elderly Persons

Nutrients supplied throughout the years affect the aging process and resistance to disease. As aging occurs, basal metabolism and activities slow down, resulting in a decreased energy need. The average man and woman, ages 55-75, need 300 to 400 calories less per day than they did during the 35-55 year period. Older persons need smaller amounts of the B-complex vitamins. Because there is no evidence that cellular changes affect the need for nutrients, the needs for protein, calcium, and vitamins A, C, and E remain the same.

Many elderly persons require special diets for various health conditions. The blender is useful in making foods easier to eat.

In working with elderly persons, helping them establish and maintain a nutritious diet is very important. Often, coaxing and encouragement are necessary to get them to eat.

Throughout the stages of life, a daily pattern to provide the nutrients should be as habitual as dressing, brushing teeth, and other routine activities!

QUESTIONS:

1. An individual's need for food is determined by ____________________________, ________________________, _________________________, and ________________ ________________.

2. The amount of heat required to raise the temperature of 1,000 grams of water 1° centigrade is a ____________________________.

3. The chemical changes that take place as food is used by the body to produce energy are referred to as ____________________________.

4. The quantity of food consumed is measured in terms of ______________ ______________.

5. The main difference between a pregnant woman's diet and the diet of her family is her increased need for ____________________________ and ____________________________.

6. Adolescents between the ages of 10 and 20 years consume more food than any other age group because of ____________________________ and ____________________________.

7. The major nutritional problem of adults is ____________________________.

8. Because the older person has cut down on physical activity his calorie allowance is ____________________________ than for a younger person.

ASSIGNMENTS:

I. Find pictures of "empty calorie" snacks. Find pictures of "nutritious" snacks. Use the pictures to make a poster or bulletin board.

II. Choose the group with which you are most concerned at your training station:

Group 1 - expectant mother
2 - infant
3 - growing child
4 - preadolescents
5 - adolescents
6 - adults
7 - elderly persons

Find a picture of this age group; prepare a poster which explains their basic nutrition needs.

GROUP WORK:

I. Combine all posters to make a bulletin board or display; or hang your poster in your training station if your employer gives you permission to display it.

UNIT IV-5

NUTRITION

SUBJECT: Planning Nutritious Meals

TASK: 9. Use nutrition information in planning, preparing, and serving meals for persons of various ages.

OBJECTIVES: When you finish this lesson, you should be able to

a. summarize the factors that should be considered in advance meal planning
b. explain the steps for meal planning
c. use the menu planning form when planning meals
d. explain the menu form for modified diets
e. describe the use of cycle menus.

REFERENCES: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 151-154.

Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. Family Meals and Hospitality. New York, New York: Macmillan Publishing Co., 1972. pp. 106-112.

MEAL PLANNING

Meal planning is not one of the usual duties of entry level food service employees. However, occasions do arise that make it necessary for the food service employee to understand the principles of meal planning. Diners in restaurants, cafeterias, schools, nursing homes, and other food service establishments may ask the food service employee for suggestions when they are selecting their food. The food service employee in a nursing home, child care center, cafeteria, or restaurant may make suggestions for low calorie items, low cholesterol items, children's dishes, appropriate desserts, snack items, or substitutions for food items on the menu. In some situations, the training sponsor may ask the food service employee to assist in the planning of meals. Because of these factors it is important for the food service employee to be able to plan menus and assist others in the selection of nutritious, enjoyable meals.

Good food service begins with a well-planned, written menu. Well-planned meals look attractive, provide the necessary nutritional requirements, satisfy the tastes and needs of the individual, and are within the budget of the institution.

Advanced planning is essential to insure that the foods needed for health are included in each day's meals. Menus can be varied even when a tight control must be kept on food costs. In addition, planning allows the most efficient scheduling of employees' time.

How far in advance menus are planned and written may vary, but one week is the minimum time recommended. Advanced planning for two, three, or four weeks is often convenient. If menus are planned in advance for longer periods of time, substitutions may be necessary if a selected food is not available.

The following steps for meal planning make the job easier.

1. Set aside a definite time to plan and write menus.
2. Have a quiet place to work. The job is harder and takes longer if there are frequent interruptions. Have a desk and a file for previous menus and records.
3. Have your pencil, eraser, paper, recipe books, and other tools at hand.
4. Review the menus for at least the previous week.
5. Consider the foods that are both available according to season and that are in plentiful supply.
6. Know what foods are on hand in the storeroom and in the refrigerator.
7. Use a variety of methods of preparation during the week.
8. Include recommended servings from the Basic Four food groups in selecting food items for the menus.

Providing bedtime nourishment is important for patients in a nursing home. Plan a bedtime nourishment for each day. Select the bedtime nourishment from such items as milk, fruit or juice, crackers, and especially food needed to complete nutritional intake for the day.

MENU PLANNING FORM

Another helpful device for meal planning is the menu planning form. The form lists each meal and the types of foods to be included in it. See the sample menu planning form on page 81. Follow this menu planning form to be sure the needed foods are included in the daily diet.

With the Basic Four food groups and the menu planning form as aids, you can take the first step toward meal planning. A few extra touches in menu planning take little time or money but add to the enjoyment of meals. For example, holidays offer opportunities to add interest to meals, since certain foods are especially appropriate for some holidays. Use table or tray decorations to celebrate special occasions. Some holidays to remember are Valentine's Day, Washington's Birthday, St. Patrick's Day, Easter, Independence Day, Halloween, Thanksgiving, and Christmas. Birthdays are important, too. Many college dormitories, children's nursery schools, and nursing homes provide a cake for each person's birthday. Use either a traditional birthday cake or a cup cake. Recognition of the individual's birthday is what counts.

DIET MODIFICATIONS

For various reasons throughout all stages of life, a person may need a modified diet. The modified diet is planned from the general diet, making only the substitutions that are necessary. Planning modified diets is not one of the duties of most food service employees. However, the food service employee should understand how a menu for a modified diet is planned from a regular menu. A trainee in any type of institution which provides specialized diets for its residents or patients should be aware of the extreme importance of strictly following prescribed diets. If a patient is given food which is not on his diet, serious health problems or a lawsuit could result.

MENU PLANNING FORM*

Day of Week Date

BREAKFAST

Fruit or juice
Cereal and/or eggs
Milk
Toast
Butter or margarine
Beverage

LUNCH

Meat, fish, or poultry
Potato or substitute
Vegetable
Salad (optional)
Bread
Butter or margarine
Dessert
Milk
Beverage

DINNER

Soup, juice, fruit (optional)
Main dish--including proteins
Vegetable and/or salad
Bread
Butter or margarine
Dessert
Milk
Beverage

PLANNED BEDTIME NOURISHMENT

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*U.S. Department of Health, Education, and Welfare. A Guide for Nutrition and Food Services. Washington, D.C.: U.S. Government Printing Office, 1971. p. 21.

When working with patients in hospitals, persons in rest homes, or children, consider their emotions in presenting diets to them. Sudden changes without adequate emotional preparation may cause serious problems.

Some substitutes may be made within restrictions of the patient's diet. When possible, present a choice of foods acceptable within the diet.

The menu on p. 83 illustrates various modified diets planned from the general diet.

CYCLE MENUS

Planning cycle menus is not one of the normal duties of the food service employee. However, the food service employee should understand how a cycle menu operates and why it is used in some food service establishments.

Cycle menus are a set of carefully planned menus. They cover a period of three to six weeks. When the period is completed, the cycle is repeated again. Because the availability of food varies with the seasons, a different set of cycle menus may be developed for winter, spring, summer, and fall.

Cycle menus save time in menu planning. Once they are set up, they can be used over and over with minor changes to allow for any unexpected development. Cycle menus improve purchasing procedures, provide better use of employees' time, and help to standardize food preparation procedures.

Cycle menus do not mean an end to menu planning. Before using each menu of the cycle, the menu should be reviewed to determine whether any changes are needed. It is possible that a food selected for a certain day may not be available and a substitution will need to be made for it. A change in menus may be necessary when a holiday occurs.

As the menus are used, a record should be kept of their acceptance, the recipes, the amounts of food prepared and leftover, and other useful information. This information aids in perfecting the menus in each cycle.

The first step in developing cycle menus is to decide on the length of the cycle. It must not be so short that the menus are repeated too often. A cycle of three weeks is usually the shortest possible. Four, five, or six weeks may be better. The same steps are used in planning cycle menus as in any menu. Cycle menus for the most frequently prescribed modified diets may be developed to accompany regular menus.

MENU FORM FOR MODIFIED DIETS*

Form No.
Date

	REGULAR MENU	SOFT	LOW CALORIE	BLAND	LOW FAT
BREAKFAST	Orange juice	→	→	→	→
	Cream of Wheat	→		→	→
	Fried egg	Soft Cooked Egg	Soft Cooked Egg	Soft Cooked Egg	Soft Cocked Egg
	Toast	→	→ 1 slice	→	→
	Jelly	→		→	→
	Milk	→	→ skim	→	→ skim
	Coffee				
LUNCH	Baked Ham	Beef Pattie	→	Beef Pattie	Beef Pattie
	Glazed Sweet Potato	Mashed Potato		→	→
	Buttered Peas	→	→ plain peas	→ pureed	→
	Endive Salad		→ lemon wedge		→ lemon wedge
	French Dressing				
	Bread	→	→ 1/2 slice	→	→
	Butter	→	→	→	→ 1 pat
	Pineapple Ice Cream	Vanilla Ice Cream	Cantaloupe	Vanilla Ice Cream	Cantaloupe
DINNER	Vegetable Soup	→	→		Consommé
	Welsh Rarebit on Rusk	→	Sliced Chicken	Sliced Chicken	Sliced Chicken
	Buttered Spinach	→	→	→ pureed	→
	Sliced Tomato Salad		→		→
	Rolls	Bread	Bread 1 slice	Bread	→
	Butter	→	→	→	
	Date Bars	Baked Custard	Peaches	Peaches	Peaches
	Milk	→	→ skim	→	→ skim

The regular menus for the day are listed in the left hand column. The arrows in other columns indicate the foods which can be taken from the regular menu for specific modified diets.

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*U.S. Department of Health, Education, and Welfare. A Guide to Nutrition and Food Service. Washington, D.C.: U.S. Government Printing Office, 1971. p. 40.

QUESTIONS:

1. Using the foods circled on the menu below, evaluate this menu by placing each food in the proper Basic Four food group on the chart on the next page.

MENU

BREAKFAST
CYCLE I MONDAY

[✓ Orange Juice]
Apple Juice

Oatmeal
[✓ Dry Cereal]

[✓ Scrambled Eggs]
Poached Eggs

[✓ Bacon]

Sweet Roll

BEVERAGE
Coffee Tea Iced Tea
Postum Hot Chocolate
Sanka [✓ Milk] Skim Milk
Chocolate Milk Buttermilk
Cream Lemon

BREAD
White [✓ Whole Wheat]

TOAST
White [✓ Whole Wheat] Melba
Butter Jelly

LUNCH
CYCLE I MONDAY

[✓ Fried Chicken Breast]
Bar-B-Que on Bun

[✓ Buttered Rice]

[✓ Buttered Squash]
Lima Beans

Fruit Salad
[✓ Tossed Salad]

[✓ Lemon Cake Pudding]

BEVERAGE
Coffee Tea [✓ Iced Tea]
Postum Hot Chocolate
Sanka Milk Skim Milk
Chocolate Milk Buttermilk
Cream Lemon

BREAD
White Whole Wheat [✓ Hot Bread]
Crackers Melba Toast Butter
Jelly

DINNER
CYCLE I MONDAY

Baked Ham
[✓ Italian Spaghetti]

Potatoes Au Gratin

[✓ Asparagus]

Sliced Tomatoes
[✓ Cottage Cheese]

[✓ Fresh Fruit Ambrosia]
Peach Cobbler

BEVERAGE
Coffee Tea Iced Tea
Postum Hot Chocolate
Sanka [✓ Milk] Skim Milk
Chocolate Milk Buttermilk
Cream Lemon

BREAD
White Whole Wheat
[✓ Hot Bread] Crackers
Melba Toast Butter
Jelly

MEAL	MILK AND MILK PRODUCTS	FISH, EGGS, MEATS	FRUITS AND VEGETABLES	BREADS AND CEREALS
BREAKFAST				
LUNCH				
DINNER				

2. Were adequate amounts of foods from each group included in the menu?

3. List five factors which determine the variety and the number of selections on a menu in the food service industry.
   a. ____________________
   b. ____________________
   c. ____________________
   d. ____________________
   e. ____________________

4. List four characteristics of a well-planned meal.
   a. ____________________
   b. ____________________
   c. ____________________
   d. ____________________

5. When planning meals for a nursing home, allow for ____________________ ____________________.

6. An aid to meal planning which lists each meal and the types of food to be included in it is called a ____________________.

7. Modified diets are planned from the ____________________.

8. A set of carefully planned menus that are used, then repeated, over a three- to six-week period is referred to as ____________________.

Place an X in the blank by the letter of the phrase that best completes the sentence.

9. Mr. Jones ordered a beef pattie, mashed potato, bread, butter, and vanilla ice cream. He told Sally, the food service employee, that he was on a bland diet and asked her to suggest a vegetable. Which vegetable should Sally suggest?
   _____a. Buttered spinach
   _____b. Puréed peas
   _____c. Glazed sweet potato

10. Joe, a food service employee in a child care center, is planning an after school snack for Judy, age 7, and Tommy, age 9. Which item would help to meet their daily food requirements?
   _____a. Ice cream soda
   _____b. Potato chips
   _____c. Candy bar

11. Mrs. Thomas has difficulty chewing and has asked Jim to suggest an apple dessert for her meal. Which dessert should Jim suggest?
   _____a. Raw apple
   _____b. Baked apple
   _____c. Candied apple

12. While assisting her training sponsor in meal planning for the patients in the nursing home, Nancy planned a menu of baked white fish, scalloped potatoes, and cauliflower. How can Nancy make the meal more appealing?
   _____a. Replace cauliflower with creamed peas
   _____b. Replace cauliflower with green beans
   _____c. Add a vanilla custard dessert

13. Mr. Brown orders coffee and a rib eye steak and hands the menu to Jean, the food service employee, who is taking the order at the restaurant. Jean should reply:
   _____a. "Thank you for your order, sir. I'll get your coffee right away."
   _____b. "Do you want anything else?"
   _____c. "Would you care for a baked potato and a salad with your steak, sir?"

ASSIGNMENTS:

I. Plan a menu that has sensory appeal. Include variety in textures, sizes, shapes, and colors.

II. Assume you have been assigned to prepare a menu for the following patients in a nursing home. Use the menu planning form (p. 81) and prepare a diet for one day for a
a) man with stomach ulcers who needs a bland diet.
b) lady with new dentures.
c) man with heart problem who needs a low-fat diet.

III. Using a restaurant menu, answer the following customer's questions:
   a) "What do you suggest I order for breakfast. I'm on a low-calorie diet?"
   b) "I can't eat much fat. What would you recommend for lunch?"
   c) "I want smothered chicken, á la carte, but I can't eat french fries. Any suggestions?"
   d) "I noticed that you don't have a 'Weight Watchers' section on the menu. What would you suggest that would be similar?" (If the menu does have a "Weight Watchers" section, overlook it.)
   e) "I am just starving, but my mouth is too sore to chew much. Do you have anything on your menu that I could eat?"

GROUP WORK:

I. Describe the meal planning procedure of the food service establishment where you are employed. Compare this procedure with the meal planning procedures of other food service establishments. Discuss the reasons for the similarities and differences in the meal planning procedures.

II. Creating attractive and appealing food which provides sensory appeal to meals is an important part of the food service industry. In addition to garnishes, discuss other ways to add interest to meals.

UNIT V-1

SMALL EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Hand Utensils

TASK: 10. Select proper hand utensil for specific food preparation tasks.

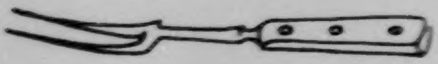
OBJECTIVES: When you finish this lesson, you should be able to
a. explain how to use hand utensils when preparing food
b. identify correct hand utensils for a specific task.

Can you identify all the hand utensils in the food service business where you are employed? Do you know which utensil will do the best job for the tasks you are assigned? Using the correct utensil for each task can save time and motion, prevent accidents, and give better results. Below are a few tips for saving time when using utensils.

1. Use as few utensils as necessary to do the job well.
2. Select the best tool for each job.
3. Assemble all needed utensils before beginning the task.

The food service business where you are employed may or may not be equipped with many specialized utensils, but you should be able to name some of the most common hand utensils and understand how to use and care for them. The following list of various hand utensils and their uses should help you achieve confidence and skill in working with such equipment.

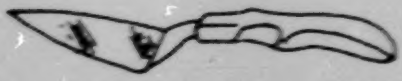
COOK'S, UTILITY, OR KITCHEN FORK



Turning and handling roasts; holding meats while slicing

8 to 14 inches in length; steel tines riveted to wooden handle

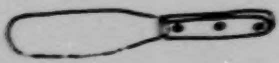
PIE KNIFE OR SERVER



Removing pieces of pie from pan

6-inch length--flat area 4 inches by 2 inches

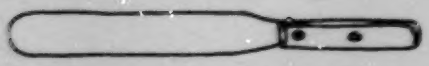
SANDWICH SPREADER



Spreading fillings on sandwiches

3 1/2-inch blade, which may be serrated

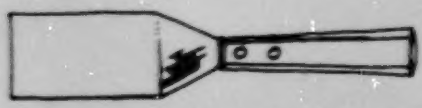
SPATULA



8 to 12 inches in length; has medium flexibility

Leveling ingredients in measuring spoons or cups; spreading large areas of foods

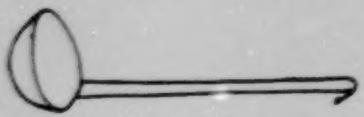
HAMBURGER TURNER



6-inch blade of stainless steel

Turning hamburgers or other meat patties

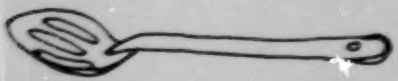
LADLES



Variety of sizes from 1 to 30 oz.

Portioning liquids such as gravies, salad dressings, soups, and sauces

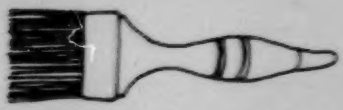
PIERCED SPOON



11 to 15 inches in length; stainless steel

Serving foods which need to be drained

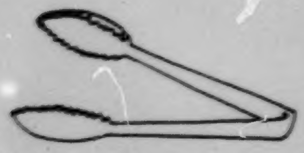
PASTRY BRUSH



Sterlized bristles held in place by rubber strip

Spreading melted butter or sauce on some food products

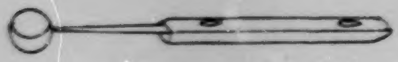
POM TONGS



9 to 12 inches in length

Handling food products such as ice cubes and rolls without touching them with hands; lifting and turning meats and vegetables

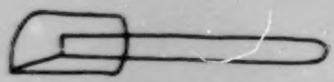
MELON BALL SCOOP



Cutting various fruits and vegetables into small balls

Stainless steel blade formed into half-ball cup

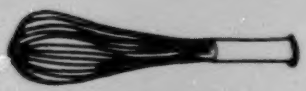
SCRAPER



Folding and blending ingredients; scraping dishes, bowls, and plates

9 1/2 or 13 1/2 inches in length; molded rubber attached to wooden or plastic handle

WIRE WHIP



Stirring and whipping ingredients; incorporating air into ingredients (more effective than rotary beater or mixer)

10, 12, or 16 inches in length; stainless steel or chrome

QUESTIONS:

Identify the following pieces of equipment. Write the name of the equipment in the corresponding blank.

1. ____________________

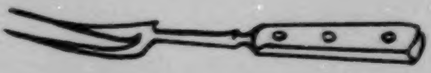
2. ____________________

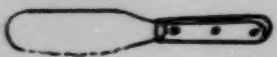
3. ____________________

4. ____________________

5. ____________________

6. ____________________

1.


2.


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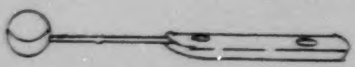

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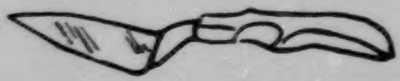

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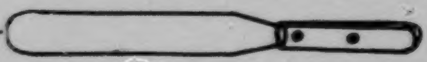
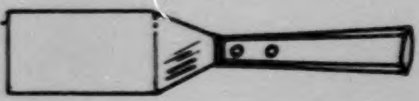


6.


Match the piece of equipment with the task. Place the letter corresponding to your choice in the blank to the left of the task.

_____7. spreading sandwiches

_____8. turning steaks or hamburgers

_____9. cutting meat loaf

_____10. loosening food from pans

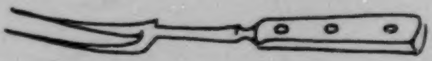
_____11. holding meat while slicing

_____12. serving pie

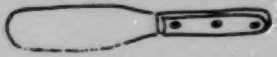
_____13. turning a roast

_____14. frosting cakes

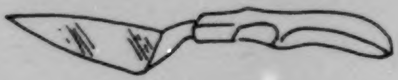
a.



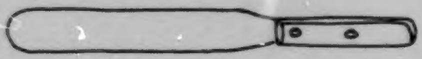
b.



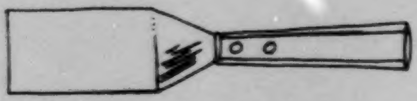
c.



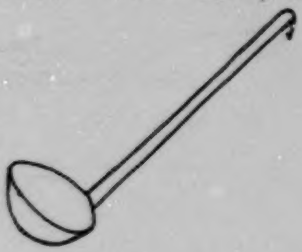
d.



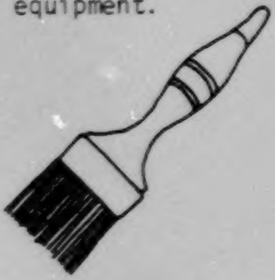
e.



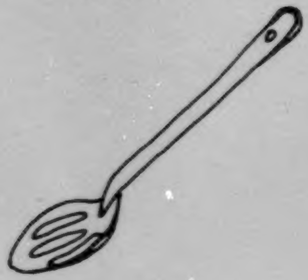
Identify these pieces of equipment and give their main use. Write your answers on the lines below each piece of equipment.



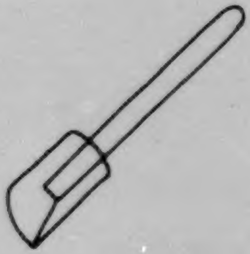
15. ______________
____
____



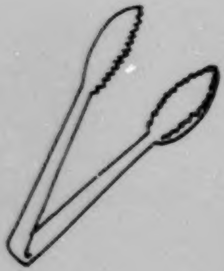
16. ______________
____
____



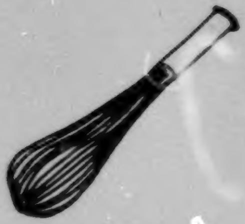
17. ______________
____
____



18. ______________
____
____



19. ______________
____
____



20. ______________
____
____

ASSIGNMENT:

I. Visit a food service supply store to note the labor saving "gadgets" available. Discuss your findings in class. Predict which may be used most or least. Which do you consider necessary? Desirable? Unnecessary? Which could be used at your training station?

GROUP WORK:

I. Divide into two teams. Listen as the leader reads excerpts from recipes. The first member in each group rings a bell if he knows what small utensil is needed for the procedure. The first to ring the bell answers. If an incorrect or incomplete answer is given, the other team gets a chance to answer. Rotate until all team members have had a chance to answer several times. The team giving the most correct answers wins the game.

UNIT V-2

SMALL EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Knives

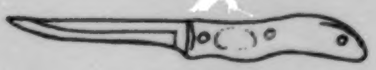
TASK: 10. Select proper hand utensil for specific food preparation tasks.

OBJECTIVES: When you finish this lesson, you should be able to
a. identify the correct knife for a specific task
b. describe safe procedures for using cutlery.

Though people differ in their ideas of which utensils are most necessary, nearly all agree that cutlery or knives are essential in every kitchen. Yet there are so many types of knives that selecting the right knife for a particular task can be a puzzling experience. The different kinds of knives have been made for specific uses. Selection of the best knife for each task can make the job easier and help insure that the task is done correctly.

Illustrations and purposes of some of the most commonly used knives are described below.

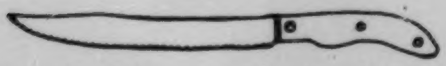
BONING KNIFE



5- to 6-inch blade made of stainless or carbon steel; wooden or plastic handle

Disjointing fowl;
separating meat from bone;
dicing raw meats;
coring [illegible]uce

BREAD KNIFE

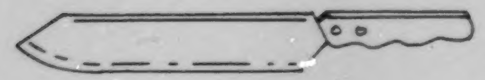


9-inch blade with serrated edge

Slicing bread or cake

HINT FOR USING: Hold bread or cake lightly and use a sawing motion with the knife.

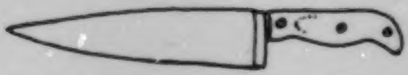
BUTCHER KNIFE



Slightly curved, heavy rigid blade with a blunt tip

Disjointing fowl;
preparing spare ribs, pork loin;
cutting brisket, short ribs from rib roast, chuck roast, rump;
cutting lobster, crawfish;
scaling fish; removing head of fish;
cutting sweet potatoes, cabbage, watermelon, squash

FRENCH KNIFE

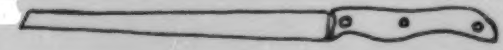


8- to 12-inch blade of crucible or stainless steel; wooden handle

Slicing and cutting raw fruits and vegetables;
slicing hot or warm meat;
chopping small quantities of materials, such as parsley, onions, and nuts;
dicing and mincing ingredients

HINT FOR USING: Hold point of knife on cutting board with one hand. Use other hand to lift handle of knife in an up-and-down slicing motion.

SLICER

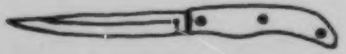


10- to 16-inch carbon or stainless steel blade which may be serrated; wooden or plastic handle

Slicing tomatoes, lettuce wedges;
slicing roast or ham;
cutting cakes or sandwiches

HINT FOR USING: When slicing meat, use back-and-forth sawing motion.

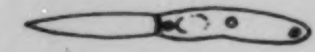
FRUIT AND SALAD KNIFE



5 1/2- to 6-inch stainless steel blade

Coring lettuce;
paring and sectioning fruits

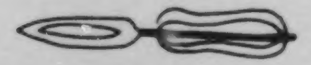
PARING KNIFE



3- to 3 1/2-inch blade of carbon or stainless steel

Paring fruits and vegetables;
removing eyes from potatoes

PEELER



6-inch floating blade

Slicing thin strips of fruits and vegetables;
peeling fruits and vegetables

Knives which are kept sharp are both easier and safer to use. Less pressure is required when the knife is sharp and there is less danger that the knife will slip.

Practices to follow which will help to keep knives sharp are:

1. Wash knives by themselves, rather than with other utensils.
2. Place knives in the dishwashing sink with the handles together and the blades pointed in the same direction.
3. Dry each knife separately and store in knife rack or a specified place in the drawer.
4. Use only for cutting and slicing, not for prying open jars or cans.

SAFETY PRACTICES IN USING CUTLERY*

Proper use and care of knives is an important factor in keeping knives in good condition. Following are some guidelines for using knives:

1. Use the correct knife for a particular job.
2. Use a cutting board whenever possible.
3. Always wash and wipe a knife from the back of the blade, being sure that your fingers do not extend to the cutting edge.
4. Do not put a knife into water where it is not easily seen.
5. When carrying a knife, hold it with the point downward.
6. Do not use a knife as a lever to pry jar lids off or for other similar purposes.
7. Do not use a knife for cutting paper and string or for sharpening pencils.
8. If it is used effectively and thoughtfully, a sharp knife is safer than a dull knife.
9. Knives stored in racks or in slots in drawers can be picked up with more safety than those which are thrown into a drawer.
10. Do not use a knife to turn food, such as hamburger patties, steaks, pork chops, or pancakes, since heat damages the blade.

QUESTIONS:

Identify the knives in the illustrations on the right. Write the name of the knife in the corresponding blank.

1. a. ____________________

   b. ____________________

   c. ____________________

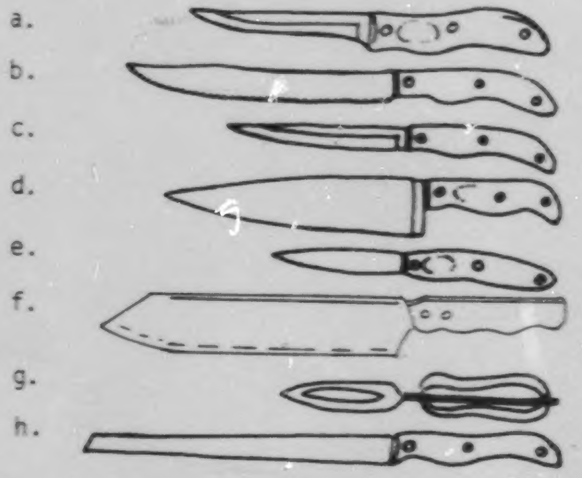
   d. ____________________

   e. ____________________

   f. ____________________

   g. ____________________

   h. ____________________



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*U.S. Department of Agriculture. Training Course Outline on Use and Care of Equipment. Washington, D.C.: U.S. Government Printing Office, 1960. p. 132.

Write the letter of the knife illustrated in Question 1 that you would use for each of the tasks listed below.

FOOD PREPARATION TASKS

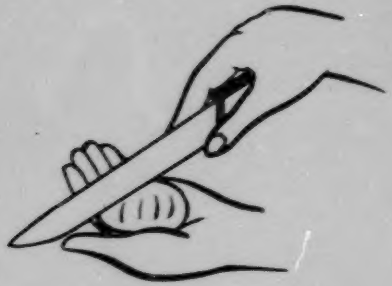
_____ 2. cutting cakes
_____ 3. peeling carrots
_____ 4. coring lettuce
_____ 5. chopping parsley
_____ 6. slicing bread
_____ 7. paring and sectioning fruits

_____ 8. removing meat from the bones
_____ 9. cutting sandwiches
_____10. slicing raw fruits
_____11. paring fruits and vegetables
_____12. slicing tomatoes
_____13. dicing raw meat
_____14. cutting brisket, short ribs from rib roast

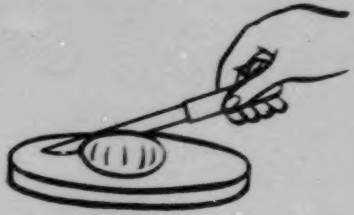
Select the correct practice in each of the following examples. Circle the letter of the correct practice.

15. Chopping

a.

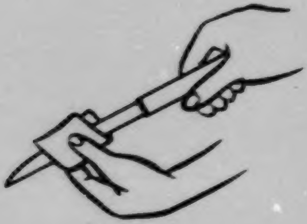


b.

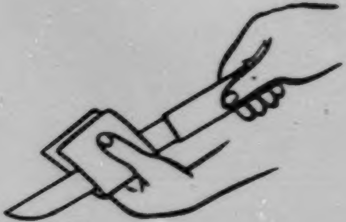


16. Washing or Wiping a Knife

a.

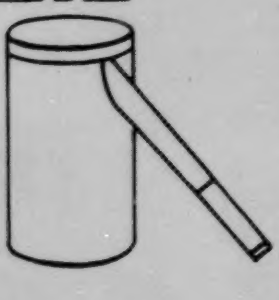


b.

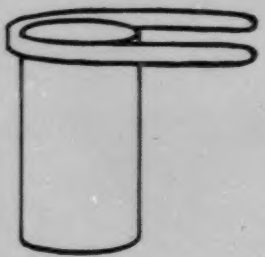


17. Opening a Jar

a.

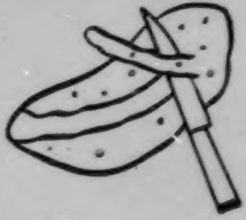


b.

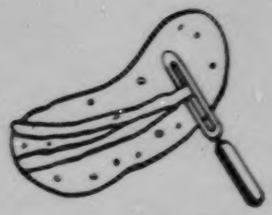


18. Paring a Potato

a.

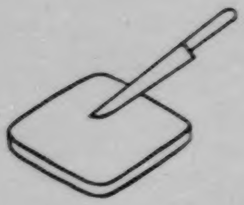


b.

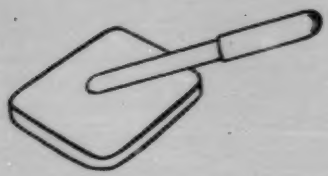


19. Spreading Sandwiches

a.

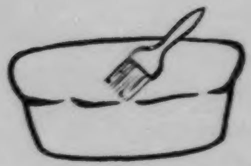


b.

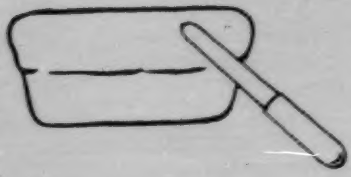


20. Spreading Melted Butter

a.



b.



ASSIGNMENT:

I. Prepare a bulletin board on safety practices to observe when using or caring for knives.

GROUP WORK:

I. In small groups produce skits to show ways that knife use affects a person's safety. Characters may be "Mr. or Ms. Careless" and "Mr. or Ms. Careful."

UNIT V-3

SMALL EQUIPMENT FOR FOOD PREPARATION AND SERVICE

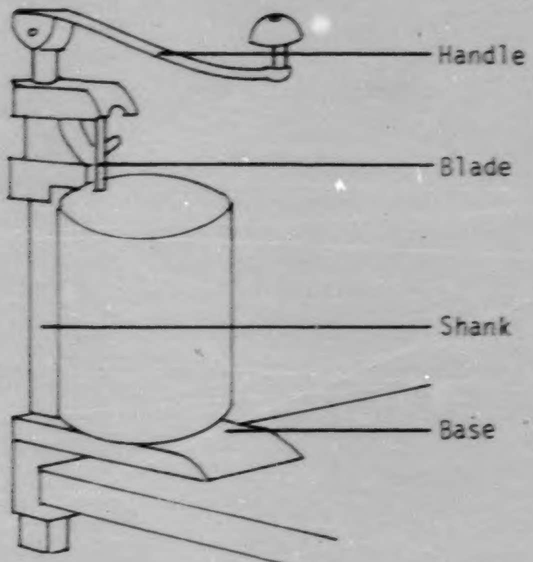
SUBJECT: Can Opener

TASK: 10. Select proper hand utensil for specific food preparation tasks.

OBJECTIVES: When you finish this lesson, you should be able to
a. state procedure for proper use and care of commercial can openers
b. summarize functions of the commercial can opener.

The commercial can opener is designed to remove the lids from cans ranging from small through institutional sizes. When properly used, the can opener will save time and energy.

BENCH-TYPE MANUAL CAN OPENER



To operate the bench-type manual can opener, lift the handle to vertical position until the cutting blade is about 1 inch above the can. Wipe off the top of the can with a damp cloth. Place the can on the base. With a quick downward pressure, force the blade into the top near the edge. Lower the handle to a horizontal position. To open the can, turn the handle clockwise until the blade cuts out the lid. Remove the lid before it falls into the can. Raise the handle to a vertical position. Lower the shank into the base of the can opener. Wipe off the blade of the can opener with a damp cloth after each operation. Food deposits that remain on a can opener not only cause off-flavors and odors in food but may also interfere with the operation of the can opener.

Clean the can opener daily. Remove the opener by lifting the shank out of the base. Soak the shank in a hot detergent solution and scrub the shank with a brush. Rinse the shank under hot running water and dry. Inspect the blade by checking for nicks and grooves which may cause metal shavings to drop into food. Following manufacturer's instructions, replace the old or badly worn blade with a new one. Keep the can opener in good repair so that it cuts sharply and leaves no ragged edges. To clean the base, wipe the base with a hot damp cloth. Give careful attention to the edge of the base.

For monthly cleaning of the can opener, clean and inspect the blade following the instructions for daily cleaning. Remove screws and the base. Scrub the blade using a hot detergent solution; rinse and dry. Clean the table under the can opener by scrubbing with a hot detergent solution; use a scraper if necessary. Rinse and dry the table. Apply a very thin film of rust preventive (cooking oil) to the shank and bottom of base. To reassemble the can opener, screw the base back in place and replace the shank.

QUESTIONS:

1. What is the function of the commercial can opener?

2. Why is it important to check the blade of the can opener for nicks and grooves?

3. Why should the blade of the can opener be wiped off with a damp cloth after each operation between different food products?

ASSIGNMENT:

I. Make a check list to follow when cleaning the can opener. Include daily cleaning, inspection of the blade, cleaning of the base, etc. Compare your check list with the check lists prepared by class members.

GROUP WORK:

I. Work with other food service employees and brainstorm to identify purposes of caring for commercial can openers. Include such purposes as the appearance, sanitation, safety, increasing durability, and minimizing repairs of the can opener.

UNIT V-4

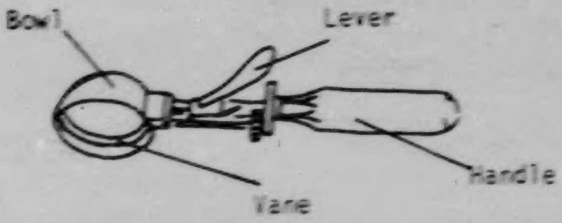
SMALL EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Dippers

TASK: 10. Select proper hand utensil for specific food preparation tasks.

OBJECTIVES: When you finish this lesson, you should be able to
a. identify parts of the dipper
b. list procedures for care of the dipper
c. list uses for various sizes of dippers.

DIPPER



Uses

The main function of the dipper is to portion food and thereby control the amount of food served. It is also used for shaping some foods.

Operation

When using the dipper, grasp the handle in the palm of your hand. Place the bowl of the dipper into the food and fill the dipper by pushing it against the side of the container which holds the food. This insures a level measurement. Do not round off or heap the dipper. Press the lever on the dipper with your thumb to release food onto the plate. The vane rotates around the bowl of the dipper to aid in releasing the food.

Special Care

To clean the dipper, wash it in warm detergent water. Use clear water with disinfectant added for rinsing. Drain and air-dry.

The chart below shows the uses of the various sizes of dippers and the number and sizes of portions per quart of food.

DIPPER SIZE	NUMBER OF PORTIONS PER QUART	SIZE OF PORTIONS (in oz., T., or c.)	USES
#6	6	6 oz. or 10 T.	luncheon-type salads
#8	8	4 to 5 oz. or 1/2 c.	luncheon foods, meats with sauces
#10	10	3 to 4 oz. or 6 T.	pudding-type desserts, ice cream, hot cereals, some vegetables, meat balls, meat patties
#12	12	2 1/3 to 3 oz. or 1/3 c.	meat salads, vegetables, muffin batter, desserts
#16	16	2 to 2 1/4 oz. or 1/4 c.	muffin batter, desserts
#20	20	1 3/4 to 2 oz. or 3 T.	muffin and cupcake batter, various sauces, and gravy
#24	24	1 1/2 to 1 3/4 oz. or 2 2/3 T.	cream puffs, cookies
#30	30	1 to 1 1/2 oz. or 2 T.	drop-type cookies

QUESTIONS:

Study the diagram of the parts of the dipper. Match the letter of the dipper parts with the statements in Items 1 through 4.

STATEMENTS	DIPPER PARTS
_____1. The dipper is held by the _____.	a. Vane
_____2. The food is measured in the _____.	b. Lever
_____3. The _____ rotates when the	c. Handle
_____4. _____ is pressed, releasing the food.	d. Bowl

5. Change the following portion servings from ounces to tablespoons or parts of a cup:

OUNCES — TABLESPOONS OR PARTS OF CUP

a. 6 oz. =
b. 4 to 5 oz. =
c. 3 to 4 oz. =
d. 2 1/3 to 3 oz. =
e. 2 to 2 1/4 oz. =
f. 1 3/4 to 2 oz. =
g. 1 1/2 to 1 3/4 oz. =
h. 1 to 1 1/2 oz. =

The number of ounces per serving determines the number of servings per quart. Using the table in the reading materials, match the number of ounces per serving with the resulting number of servings per quart in Items 6 through 13.

OUNCES PER SERVING

_____ 6. 1 to 1 1/2 oz.
_____ 7. 1 1/2 to 1 3/4 oz.
_____ 8. 1 3/4 to 2 oz.
_____ 9. 2 to 2 1/4 oz.
_____10. 2 1/3 to 3 oz.
_____11. 3 to 4 oz.
_____12. 4 to 5 oz.
_____13. 6 oz.

SERVINGS PER QUART

a. 8
b. 16
c. 20
d. 6
e. 12
f. 24
g. 10
h. 30

14. What is the relationship between the number of servings per quart and the number of the dipper size?

15. Give the number and size of servings per quart that the following sizes of dippers serve.

DIPPER SIZE	NUMBER SERVINGS PER QUART	SIZE IN OUNCES
a. # 12	____________	____________
b. # 16	____________	____________
c. # 6	____________	____________
d. # 10	____________	____________
e. # 8	____________	____________
f. # 24	____________	____________
g. # 20	____________	____________
h. # 30	____________	____________

For each food and serving size listed locate the appropriate dipper size. Use each letter only once.

FOODS AND SERVING SIZE

_____16. Muffin batter, desserts;
2 to 2 1/4 oz. or 1/4 c.
portions

_____17. Pudding-type desserts, meat
patties, meatballs,
vegetables, hot cereals;
3 to 4 oz. or 6 T. portions

_____18. Luncheon-type salads;
6 oz. or 12 T. portions

_____19. Muffin and cupcake batter,
sauces, and gravy;
1 3/4 to 2 oz. or 3 T. portions

_____20. Luncheon foods, meats with sauces;
4 to 5 oz. or 1/2 c. portions

_____21. Cream puffs and cookies;
1 1/2 to 1 3/4 oz. or 2 2/3 T. portions

_____22. Meat salads, vegetables, muffin
batter, desserts, salads;
2 1/3 to 3 oz. or 1/3 c. portions

_____23. Drop-type cookies;
1 to 1 1/2 oz. or 2 T. portions

DIPPER SIZE

a. # 6
b. # 8
c. # 10
d. # 12
e. # 16
f. # 20
g. # 24
h. # 30

24. Suzie had been using the # 10 dipper to portion the chocolate pudding for the evening meal. The steps she should use to clean the dipper are:
a.
b.
c.
d.

ASSIGNMENT:

I. List the sizes of dippers which you often use at your training station. What food items are the dippers used for? Compare your list with those of other food service employees to learn the uses of dippers in other food service establishments.

GROUP WORK:

I. In small groups, brainstorm to identify the advantages of using dippers in food preparation. One advantage would be to control the amount of food served. What other advantages can you think of?

UNIT V-5

SMALL EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Weighing and Measuring Equipment

TASK: 11. Measure and weigh foods according to specifications listed in standard recipes.

OBJECTIVES: When you finish this lesson, you should be able to:
a. list procedures for using standard weights and measurements accurately and correctly
b. describe procedures for use and care of scales and balances.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Company, Inc., 1974. pp. 102-103.

The food service employee should become familiar with the procedures and measurements which are used for measuring ingredients at his training station. Selection of the proper measuring equipment is a primary factor in being able to prepare standard food products consistently. After choosing the appropriate measure for the task involved, the food service employee must develop skill in using it correctly.

Quality in food production cannot be achieved unless the amounts called for in the recipe are measured carefully. Measurements of ingredients must be level in order to be accurate. Suggestions for using measuring equipment are given in this unit.

Types of measures include:

1. U.S. Standard graduated dry measuring cups -- stainless steel or aluminum preferred

   Set or "nest" of four measures including 1 cup, 1/2 cup, 1/3 cup, and 1/4 cup

2. Liquid measuring equipment -- glass or clear plastic recommended; the space at the top above the graduated measurements prevents spilling the liquid

   1 cup size with lines indicating 1/4 cup intervals

   1 pint size with lines indicating cup intervals

   1 quart size with lines indicating cup intervals

   2 quart size with lines indicating cup intervals

   1 gallon size with lines indicating quart intervals

3. Measuring cup for either liquid or dry ingredients -- limited use for dry ingredients because only full cup measurements can be leveled off

   1 cup measure with fractions indicated by ridges on the outside and grooves on the inside

4. Measuring and mixing bowl set

   1 cup, 1 1/2 pint, and 2 quart containers which have tapered pouring spouts

5. Measuring spoons

   U.S. Standard graduated set including 1/4 teaspoon, 1/2 teaspoon, 1 teaspoon, and 1 tablespoon

Suggestions to be considered in using the various types of measuring equipment are the following:

1. Cups which have the rim above the "full cup" line and a pouring lip or spout are used for measuring liquids.
2. Cups without the rim or pouring lip are used for measuring dry ingredients and shortening.
3. Graduated spoons are used for measuring small amounts of liquids and dry ingredients.
4. Larger measures are used, whenever possible, to avoid filling the smaller measure several times.

How to Measure:

1. Flour	Sift flour before measuring to make it light and to remove any lumps. Spoon or scoop sifted flour gently into cup. Do not shake, pack, or hit the side of measuring cup. Move a straight edge knife or spatula across top edge of measuring container to remove excess flour.
2. Confectioner's sugar	Measure in the same way as flour.
3. Brown sugar	Pack firmly into measuring container (unless stated otherwise) to insure accuracy of the measurement. When loosely packed, the amounts of brown sugar vary from one measuring to the next.

4.	Fats	Measure by pressing firmly into measuring container and leveling off.
5.	Liquids	Place measuring cup on a flat surface and read measurement at eye level.
6.	Few grains, speck, or a pinch	Use amount of the ingredient which can be held between thumb and forefinger.
7.	Fractions of a teaspoon or tablespoon	Fill and level a teaspoon or tablespoon if the correct size spoon is not available. Run a knife lengthwise through the center of the spoon for a 1/2 spoonful measure and then crosswise through the center of the spoon to divide the ingredients into 1/4 spoonfuls.

Tips to be followed in the care of measuring equipment:

1. Wash thoroughly and dry after each use.
2. Use plastic measures carefully because they warp easily and are then no longer accurate.
3. Handle glass measures carefully because they chip easily.
4. Care for measuring spoons by using them only for measuring -- not for mixing or stirring.
5. Store measuring equipment carefully because bent measures are no longer accurate.

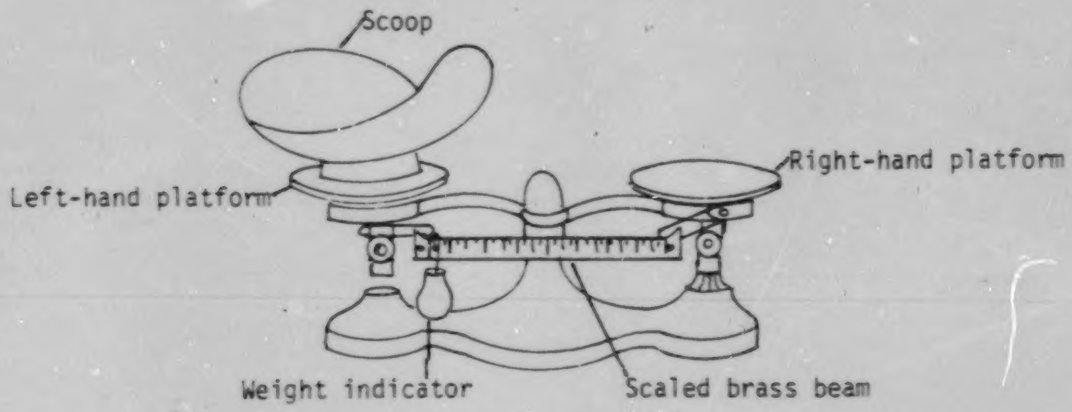
Functions of Scales and Balances

Scales and balances are used in quantity food preparation to save time and assure accuracy. Because ingredients are not all the same weight, it is not always correct to say that 2 cups of an ingredient equal 1 pound. When the amounts in a recipe are expressed in ounces or pounds, it is important that ingredients be weighed instead of measured.

Scales and other equipment used for weighing must be kept clean. This may be done by wiping the scale with a damp cloth after weighing each ingredient. At the end of the day, weighing equipment should be checked to see that ingredients have not accumulated on it.

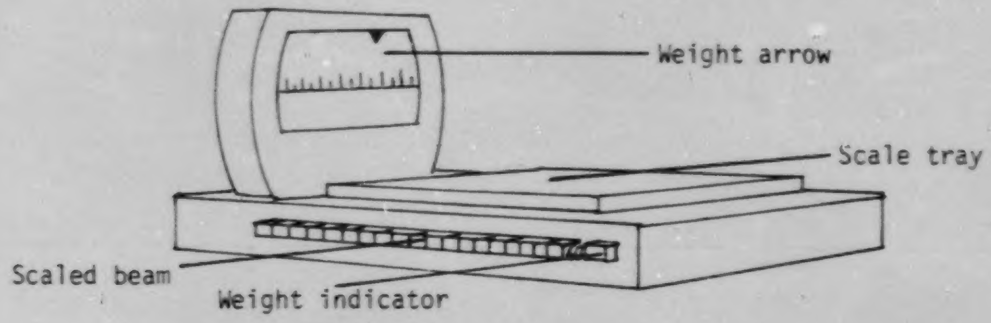
Several acceptable types or models of scales and balances are used in food service. These include (1) the spring-type model which is used for weighing dry ingredients, such as beans, macaroni, rice, cheese, fruits, and vegetables; (2) the gravity-activated type, called the balance scale, which is used for weighing batters and mixes; (3) the portion scale which is used for weighing portions of food and rolls; (4) the baker's scale which is used for weighing ingredients or for scaling dough. For instance, dough for a loaf of bread is weighed for uniform sized loaves.

BAKER'S SCALE



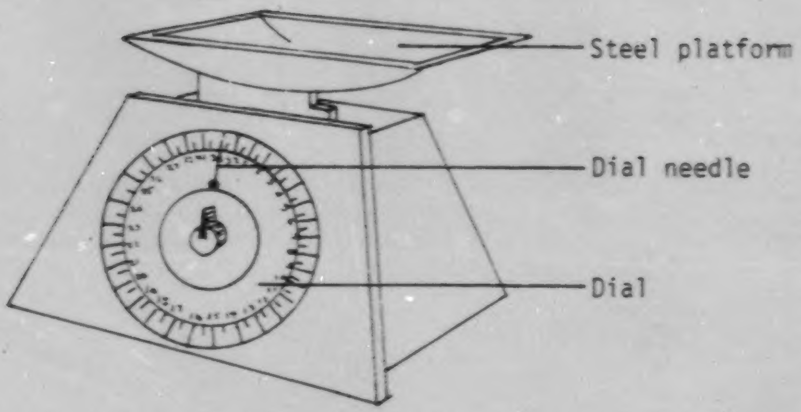
To operate the baker's scale, place the weight indicator at zero on the scaled brass beam, which indicates ounces up to 1 pound. Center the scoop on the left-hand platform. Balance the scoop by placing the proper weight on the right-hand platform. Weights are used to balance the two platforms. The left platform should be slightly lower than the right platform. Move the weight indicator on the brass beam to the right until the desired weight is found and the two platforms are balanced. The ingredients to be weighed are placed in the scoop on the left-hand platform. If necessary, add or remove a portion of the ingredients to make the platforms balance. When the weighing procedure has been completed, remove the ingredients or food items being weighed and return the scales to a balanced position.

PORTION SCALE



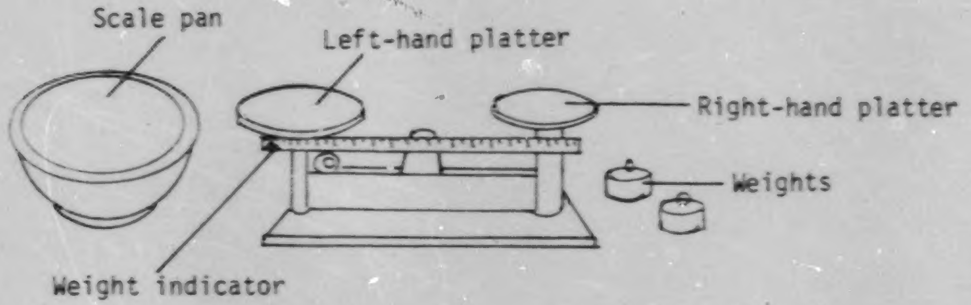
To operate the portion scale, place the weight indicator in the groove along the scaled beam for the desired portion size. Place the product on the scaled tray. Check the weight arrow to see if the portion needs to be increased or decreased.

SPRING-TYPE SCALE



To operate the spring-type scale, place the product to be weighed on the steel platform. The rotating dial needle indicates the weight of the product. The dial on the front of the scale is graduated from 1/4 ounce to 32 ounces.

BALANCE SCALE



To operate the balance scale, remove all weights from the right-hand platter. Remove the scale pan from the left-hand platter. Place the weight indicator into the zero notch. Platters should come to rest in a position level and opposite to each other. (When scales are in a balance position, touching either platter should cause both platters to move in an up-and-down motion before again coming to rest in the balance positions.) Select weights appropriate for the measurement and place them on the right-hand platter. Place the weight indicator in the proper notch. Placing the weight on the scales will cause the right-hand platter to swing downward and rest on the frame of the scales. Place the food item on the left-hand platter in an amount just sufficient to bring scales into a balance position. (The item to be measured can be added in relatively large amounts until the scales begin to swing into a balance position. Smaller amounts should be added until the exact balance position is accomplished.)

Clean the scales daily by wiping the platter or platform with a damp cloth. Wash the scale pan after each use with detergent water and a clean cloth. Let the scales air-dry.

QUESTIONS:

1. All measurements must be level to be accurate. Describe the procedure used to level dry measurements.

2. Why is it recommended that both glass and metal measuring cups be used in food preparation?

3. Why should brown sugar be packed firmly when measuring?

4. Fractional measurements are possible without a measuring spoon of that specific fraction. Explain how you would measure 1/8 teaspoon allspice.

5. Why is flour sifted before measuring?

6. Why should standard measures be used in food preparation?

7. Why is weighing ingredients recommended for quantity food production?

For each function listed locate the type scale associated with it. Place the letter corresponding to your choice in the blank to the left of each function. Use a letter only once.

FUNCTION

_____ 8. Weighing servings of food and rolls

_____ 9. Weighing dry ingredients such as beans, macaroni, rice, cheese, fruits, and vegetables

_____10. Weighing ingredients or scaling dough

_____11. Weighing batters and mixes

SCALES

a. Baker's scale

b. Balance scale

c. Portion scale

d. Spring-type scale

ASSIGNMENT:

I. Identify the type of scales and balances used at your training station. Explain the use and care of the scales.

GROUP WORK:

I. In small groups, make a list explaining the use of devices, such as measuring cups, scales, and balances in food preparation. How does each save time and assure accuracy? The groups should then compare lists.

UNIT VI-1

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Cleaning and Disposal Equipment

TASK: 12. Select and correctly use proper piece of equipment for a specified job in food preparation and service.

OBJECTIVES: When you finish this lesson, you should be able to
a. identify parts of the commercial dishwasher
b. describe procedure for operation of a commercial dishwasher
c. list precautions in using and caring for the commercial dishwasher
d. describe use and care of a garbage disposal.

REFERENCE: Cornelius, Ethelwyn, G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 289, 294-298.

COMMERCIAL DISHWASHER AND POT AND PAN SINK

The use of mechanical dishwashing in food service operations has grown tremendously in recent years. Owners and operators of food service establishments have learned that mechanical dishwashing is more effective and faster than hand dishwashing and that it takes less personnel to do the job.

There are many types of mechanical dishwashing machines, but all of them require the same basic steps for effective dishwashing. These steps are scraping, prewashing, racking, washing (in machine), rinsing, sanitizing, air-drying, and clean storage of the utensils until the next use.

The types of dishwashing machines generally fall into two categories, commonly referred to as single-tank and multiple-tank machines. Single-tank machines are used either in smaller establishments or for specialized operations in larger establishments. The machines have a single tank for wash water. The tank varies in capacity depending on the manufacturer and the particular model of the machine. The pump recirculates the wash water to spray each rack of dishes placed in the machine.

The two most common single-tank machines are the door-type and the conveyor-type. The door-type machine has two doors that can be raised and lowered to admit dishes into the machine. Usually these two doors are interlocked so that if one door is raised or lowered, the other is also raised or lowered. When lowered into place, the doors provide a watertight compartment in which washing can occur without splashing wash or rinse water outside the machine. The other single-tank machine is the conveyor-type. Racks filled with utensils and tableware move through the machine on a conveyor chain, a continuous moving belt.

The multiple-tank machines are used in large food establishments where large numbers of utensils are washed. They are manufactured in several sizes which are capable of washing from 6,000 to 18,000 utensils per hour. The most commonly used multiple-tank dishwashing machines are the flight-type machines.

Instead of utensils and tableware being conveyed through the machine in racks, the utensils and tableware are placed individually on a continuous belt that carries them into, through, and out of the machine.

The conveyor belts on the dishwashing machines are continuous and return underneath the machine to be reloaded with more utensils or racks of utensils. Operators are located at the start of the machine to load the conveyor belt with utensils; and one or more operators are located at the exit end of the machine to remove the utensils from the belt before it passes underneath the machine for a return trip. Since the utensils are at a temperature of nearly 180° F., which is too hot for the hands, the workers should use clean asbestos gloves to protect their hands from the heat of the utensils.

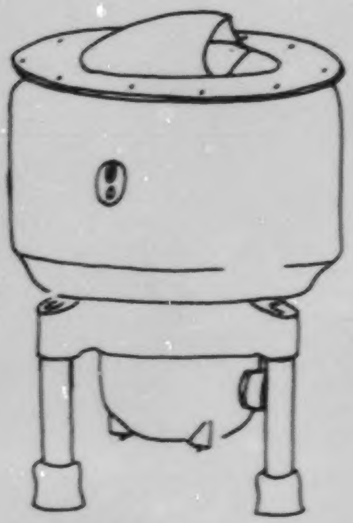
It is important to follow the directions for the operation and care of the particular dishwashing machine at your training station. General instructions for the operation and care of dishwashers are given in the reference (Cornelius, pp. 294-298).

Cleaning of large or bulky utensils, such as pots and pans, requires conscientious effort on the part of employees. It is just as important to wash and sanitize the pots and pans as any other utensil used in either the preparation or serving of food. Pots and pans are usually washed in a three compartment sink. One of the compartments is used for washing, another for rinsing, and the third for sanitizing. The sanitizing techniques are essentially the same as for other utensils.

Clean the dishwashing equipment thoroughly at the end of each washing period and have the equipment ready for the next shift. General instructions for cleaning a dishwashing machine are given in the reference (Cornelius, pp. 296-298).

GARBAGE DISPOSAL

The sanitary disposal of waste is of great importance to the operation of a food service institution. One of the best ways to do this is to use a garbage disposal because garbage is ground to a pulp and is carried into the sewer line.



To operate the garbage disposal, press the "On" switch. This turns on the water and starts the action of the knife blades which do the grinding. Feed garbage into the disposal gradually, being careful not to overload the machine. Check to see that there are no large bones, corn cobs, cabbage cores, silverware, or other items which would damage the knives in the disposal. Keep fingers and hands away from knife blades.

When the grinding action is completed, allow the machine to run at least 5 minutes longer to make sure that all garbage has been washed away from the knife blades.

To clean the disposal, turn the switch to "Off" position. Remove the cover and wash the inside and outside with water and a mild detergent. Rinse with clear water and dry.

When a garbage disposal is not available, keep the garbage covered in sanitized garbage cans. The containers should be covered with tight-fitting lids or covers. Plastic bags are now used as liners to keep the containers cleaner. After the containers have been emptied, clean the inside and outside thoroughly. This cleaning should be done in a place where food, equipment, utensils, or food preparation areas will not be contaminated.

Refrigeration of garbage delays decomposition and prevents odor. All waste should be removed from the premises daily.

QUESTIONS:

1. List the basic steps for effective dishwashing.

2. The two categories of dishwashing machines are _________________________ and _________________________.

3. How should cups and glasses be placed in the dishwashing machine?

4. An important rule to remember when loading the dishwasher is:

5. How should silver be placed in the silver racks?

6. What is the recommended temperature for wash water used in the dish washing machine?

7. What are the three compartments of the pot and pan sink used for?

Place an X in the blank by the letter of the phrase that best completes the sentence.

8. The most adequate means of waste removal from a food service institution is by
    _____a. selling it to local farmers.
    _____b. a garbage disposal unit.
    _____c. an incinerator.

9. When the garbage disposal is turned on, water flows into it and the grinding blades are
_____a. activated.
_____b. stationary.
_____c. suspended.

10. The garbage should be fed into the machine
_____a. all at once.
_____b. rapidly.
_____c. gradually.

11. To be certain all garbage is washed away from the blades, the machine should run for five minutes after
_____a. the water is turned off.
_____b. all food has been ground
_____c. the blades have stopped.

12. To prevent odor from garbage when a disposal is not available, the covered garbage cans may be stored
_____a. in the walk-in refrigerator.
_____b. outside the back door.
_____c. in a closet.

ASSIGNMENT:

I. Analyze the procedure you use when washing dishes. What can you do to improve your organization of this task? (Consult the reference for ideas.)

GROUP WORK:

I. Compare the type of dishwashing machine used at your training station with the types used by other food service employees.

II. View a film or observe a demonstration on the operation of dishwashing machines. Compare the operation of the dishwashing machine in the film with the one used at your training station.

UNIT VI-2

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Cold Storage Equipment

TASK: 12. Select and correctly use the proper piece of equipment for a specified job in food preparation and service.

OBJECTIVES: When you finish this lesson, you should be able to
- a. state procedure for proper use and care of cold storage equipment
- b. describe trouble signals in refrigeration.

REFRIGERATORS

A refrigerator cools food and keeps it cool. A temperature below 45° F. (7.2° C.) in the refrigerator helps to prevent spoilage of leftover food by removing the heat as soon as possible. It also serves to chill those foods which taste better when eaten cold. In addition to the household size refrigerators, food service establishments use both walk-in and reach-in refrigerators. Smaller refrigerators may be located away from the regular food service area for convenience in serving desserts, salads, and butter. The pass-through refrigerator is used between the kitchen and the serving area. Food items, such as salads, can be made in the food preparation area and placed in the pass-through refrigerator. Serving personnel can open the door on their side of the pass-through refrigerator and obtain the prepared food. The pass-through refrigerator saves steps for food preparation and serving personnel.

Storage in the Refrigerator

Temperatures vary in different parts of the refrigerator. These variations are due to the circulation of air near the cooling coils. It is important, then, that refrigerators not be crowded. Containers should be placed so that the circulation of air is not hampered.

Guidelines for Proper Storage in Different Areas of the Refrigerator

COLD	COLDER	COLDEST	FREEZING COMPARTMENT
Raw fruits Vegetables	Cooked meats Eggs Butter Cooked foods containing any of above ingredients	Milk Cream Raw meat, fish, poultry	All frozen foods, desserts to be frozen

Hints for Best Refrigeration of Foods

1. Containers should be dry and covered before they are placed in the refrigerator.
2. Doors should be opened only when necessary. Outside air carries moisture and causes frost to form.
3. Hot food should be placed in the refrigerator to speed cooling.
4. Do not obstruct mechanical units. Place food so that it does not crowd the cooling unit. Keep rags, aprons, and trays off the equipment enclosure.

Safety Precautions

Do not attempt to adjust, repair, or lubricate any electrical or mechanical parts of refrigerators. If these parts are not performing properly, notify your supervisor.

Trouble Signals to be Reported to Food Service Supervisor Include:

1. Excessive cooling indicated by frosting on coils
2. Unusual noises or vibrations
3. Failure to operate or maintain temperature.

Care of Refrigerators:

Clean the reach-in refrigerator daily by wiping up immediately any food that has spilled. With a damp cloth, wipe the inside and outside of the doors and door gaskets, and the exterior of the refrigerator.

The weekly procedure for cleaning the reach-in refrigerator is to turn off the switch and disconnect the plug from the outlet. Remove food from the refriger-ator and cover or wrap the food to minimize temperature changes. To clean the interior of the refrigerator, wash the shelves, walls, and inside of the doors with warm water. Add baking soda (1 tablespoon baking soda to 1 quart of water) to prevent odors. Do not use vinegar, salt, or caustic agent (any chemical that burns or eats away) in cleaning solutions. Wash the exterior of the refrigerator with a hot detergent solution. Rinse with water to which a sanitizer has been added. Dry with a clean dry cloth. Polish the exterior as needed. Do not use powders that will scratch the finish in cleaning the refrigerator. Do not use ammonia or scouring pads. Inspect foods carefully for quality. Do not return slightly spoiled or contaminated food to the re-frigerator. Insert the plug and turn on the switch of the refrigerator.

The walk-in refrigerator should be cleaned daily by wiping up immediately food that has spilled. The inside and the outside of doors should be wiped with a damp cloth.

The weekly procedure for cleaning the walk-in refrigerator is to turn off the switch, remove the plug from the outlet, and remove the food. The food should be covered or wrapped to minimize temperature changes. Using a stiff brush, remove and wash all portable equipment with a hot detergent solution. Pull out and wash the shelves with the solution. Rinse and dry. Clean the interior of the walk-in refrigerator by scrubbing the walls, door, stationary equipment, and floors with a stiff brush and mop and a hot detergent solution. To keep walk-in refrigerators free of odors; use a sanitizer. Rinse thoroughly. Flush drain pipes with hot water and baking soda. Wash the exterior with a hot detergent solution. Rinse with water that contains a sanitizer, and dry the surface. Use a clean mop and mop the floor with warm water and a sanitizer. Inspect foods carefully for quality. Put foods in a clean container and return them to the refrigerator. Insert the plug and turn on the switch.

Defrost refrigerators when frost is 1/4-inch thick on coils or other parts of the interior. If necessary, see the manufacturer's directions for specific instructions. Always clean the refrigerator after defrosting.

Thermometers should be provided on all refrigerators, and temperature readings should be taken daily. Many walk-in refrigerators have a recording-temperature which registers the temperature throughout a twenty-four hour period. Alarm bells or signals are placed on walk-in refrigerators to operate when the refrigerator is not functioning. The following temperature ranges are a guide when separate refrigeration is available for different types of food: dairy products 38° - 45° F. (3.3° - 7.2° C.); fruit and vegetables 44° - 45° F. (6.6° - 7.2° C.); meat and poultry 33° - 36° F. (.5° - 2.2° C.). Where one refrigerator is used for all refrigerated storage, a temperature of 35° - 45° F. (1.7° - 7.2° C.) is recommended.

Guide to Using Refrigerators

1. Check operation of walk-in refrigerator first thing in morning and before leaving in afternoon.
2. Keep constant check with accurate thermometer to see that proper temperature is maintained in refrigerator.
3. Check to see that door of a walk-in refrigerator opens from the inside.
4. Open refrigerator door only when necessary. Collect all items needed at one trip by using a wheeled cart.
5. Place foods used most frequently nearest the door.
6. Place foods in the proper section of the refrigerator, since various food items require different degrees of temperature and humidity.
7. Use same general area of the refrigerator for the storage of specific foods, thus avoiding hunting around, which causes loss of cold air.
8. Store foods that absorb odors away from those foods that give off odors.
9. Avoid crowding refrigerator, as good air circulation is of major importance. Overloading also causes the temperature to rise.
10. Bring older foods toward front so that they will be used first. Immediately remove foods showing signs of spoilage.
11. Cooked foods require quick cooling and should be refrigerated within 2-3 hours to avoid danger of food-borne illness.
12. Do not store foods that do not need refrigeration in refrigerator.
13. Stack rectangular pans criss-cross to provide more shelf space.
14. Store food properly in refrigerator: cover cooked foods; cover most raw foods; loosely cover raw meat; store salad greens in large polyethelene bags; always remove outer wrapping that would interfere with air circulation and might introduce contamination.
15. Wipe up water and spilled foods immediately.

FREEZERS

Store frozen food at 0° F. (-17.8° C.) or lower. Frozen food held at temperatures above 0° F. (-17.8° C.) looses color, flavor, and other quality factors. Check the temperature of the freezer frequently, as quality loss occurs quickly as temperatures rise.

Frozen food should be solidly frozen when it is received. Purchase frozen food from a source that has stored it at 0° F. (-17.8° C.) or lower, and do not accept damaged packages or ones with frozen ice crystals on the outside, which indicate thawing and refreezing. Broken wrappings may lead to moisture loss and drying out and may also indicate careless handling and storage. Place frozen foods in the freezer as soon as they are received and date the packages so that the oldest items are used first. All items placed in the freezer should be wrapped to prevent freezer burn or dehydration, which is the loss of water from foods.

Refreezing of frozen foods is unwise because of possible undesirable changes in flavor, color, or texture. Frozen food that has completely thawed should not be refrozen without cooking because there may have been growth of bacteria.

Freezing of food should be done rapidly at a very low temperature. Minus 40° F. (-40° C.) is a temperature used by commercial freezing operations. Food can be frozen satisfactorily at 0° F. (-17.8° C.) if the amount of food to be frozen is limited so that quick and efficient freezing is possible.

Thermometers should be provided on all freezers. Temperature readings should be taken daily to check the performance of the freezer. The walk-in freezer should have an alarm system which may be sounded in case of accidental entrapment. Bells or signals should be placed on freezers to sound when the freezer is not functioning.

Care of Freezers

Clean the freezer daily by wiping the exterior with a damp cloth. Once a week wash the exterior of the freezer with a hot detergent solution. Rinse the exterior with a water and sanitizer solution and dry the surface.

Defrost the freezer once or twice a year, as needed, when frost becomes 3/8-inch to 1/2-inch thick on the sides or coils. When defrosting the freezer, disconnect the freezer by removing the plug from the outlet. Remove all food packages; cover or wrap them and place them in the walk-in refrigerator, if possible. Scrape as much frost as possible from the surfaces with a broad, stiff plastic spatula or a special tool. Use caution when scraping ice; never use a knife, ice pick, or other sharp objects. You may use cold water to run over the refrigerated surfaces. Never use hot water. Removing the ice from the surface at intervals, as it loosens, speeds the defrosting process. Wash the interior and inside of doors with warm water and baking soda (1 tablespoon baking soda to 1 quart of water). To keep freezers free of odors, use a sanitizer. To clean the exterior, wash with a hot detergent solution, rinse with a water and sanitizer solution, and dry. Insert the plug; then turn on switch. Let the freezer run for at least half an hour to bring the temperature down.

Inspect food packages and containers to make certain they are in good condition. Take an inventory and place older packages and containers at the front or top of the freezer for use first.

Guide for Using Freezers*

1. Check frequently to see that proper temperature (0° F. (-17.8° C.) or below is maintained. Temperatures above 0° F. (-17.8° C.), even for brief periods of time, cause products to lose quality.
2. Open freezer door only when necessary; make certain door is closed tightly and sealed. Collect all items needed at one trip by using wheeled cart.
3. Check operation of freezer first thing in morning and before leaving in afternoon.
4. Store foods in original shipping containers, if possible, to reduce the possibility of freezer burn and drying out of foods.
5. If original containers have been damaged or if space does not permit storing in shipping containers, rewrap individual packages of foods in moisture-vapor-proof packaging material before placing in freezer.
6. If frozen foods have thawed, do not refreeze. If in quality condition, use immediately or refrigerate and use within 24 hours.
7. When freezing freshly cooked foods, chill food promptly and thoroughly; then package in moisture-vapor-proof materials or containers to exclude air and prevent loss of moisture. To assure uniform and rapid freezing, place packages in contact with freezing surface and not with each other.
8. Do not open freezer if current goes off. If current is off for more than 48 hours, wrap dry ice in paper; open lid or door just long enough to put dry ice over food and close immediately. If current remains off for more than 48 hours, move food to 0° F. (-17.8° C.) storage; make transfer quickly and with as little handling as possible.
9. When defrosting, do not chip ice off with ice pick or other sharp tool that might damage liner surface or coils. Use broad, stiff spatula; putty knife; or special tool. Do not use hot water.
10. After defrosting, inspect food packages and containers to make certain they are in good condition. Take an inventory and place older packages and containers at front or top of freezer for use first.

Safety Precautions for Cold Storage Equipment

Do not attempt to adjust, repair, or lubricate any electrical or mechanical parts of refrigerators or freezers. If these parts are not performing properly, notify the supervisor. Some trouble signals to be reported to the food service supervisor include: excessive cooling indicated by frosting on the coils, unusual noises or vibrations, failure to operate, or failure to maintain proper temperature.

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*U.S. Department of Agriculture. *Training Course Outline on Use and Care of Equipment*. Washington, D.C.: U.S. Government Printing Office, 1960. p. 102.

QUESTIONS:

1. When storing food in the refrigerator, you should place items so that air may ____________________ freely around containers.

2. In order to prevent refrigerated food from drying out, you should ____________________ all containers.

3. Opening the door of a refrigerator only when necessary helps prevent ____________________ formation.

4. Raw meats, fish, and poultry should be stored in the ____________________ part of the refrigerator.

5. Frost should be removed from the refrigerator when it has built to a ____________________-inch thickness.

6. Door gaskets should be wiped clean ____________________.

7. A solution of ____________________ may be used to help prevent odors in the refrigerator.

8. Frozen food should be stored at ____________________ or lower.

9. To prevent dehydration, you should ____________________ all food items placed in the freezer.

10. Older packages and containers should be arranged in the freezer for use ____________________.

11. When frost has built to a ____________________ thickness on sides or coils, frost should be removed from the freezer.

ASSIGNMENT:

I. List the cold storage equipment which you use at your training station. What procedures do you often use at your training station? What procedures do you follow in the care of these pieces of equipment?

GROUP WORK:

I. With other food service employees, discuss the procedures used at training stations for use and care of cold storage equipment. Compare the safety precautions followed when cleaning the equipment.

II. View a filmstrip on the principles of refrigerated food storage. Compare the procedure for food storage shown in the filmstrip with the procedure used at your training station.

UNIT VI-3

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Beverage Equipment

TASK: 12. Select and correctly use proper piece of equipment for a specified job in food preparation and service.

OBJECTIVES: When you finish this lesson, you should be able to

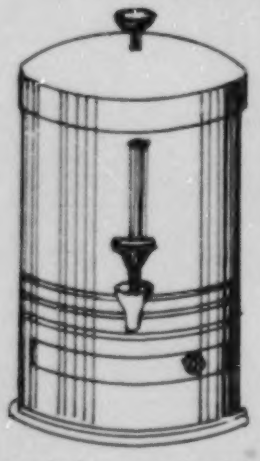
a. identify parts of coffee makers
b. describe procedures for operation and care of coffee makers
c. describe procedure for making tea
d. explain procedures for care of pumps and dispensers
e. summarize procedures for care of ice making machines.

REFERENCE: Cornelius, Ethelwyn, G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 142-143.

In food service kitchens, coffee is generally made in either a coffee urn, a vacuum coffee maker, or an automatic coffee brewer. Before operating the equipment, read the directions for use of the equipment or observe someone demonstrating its use.

Coffee makers for instant coffee are also available. These may be made of stainless steel, silver, nickel, chrome, or other less durable metals. Glass and porcelain do not give off metallic flavors, but they require extra care to avoid chipping and breaking.

COFFEE URN



The coffee urn has an inside container made of glass or stainless steel which holds the coffee brew; an outside jacket holds both hot water to keep the coffee warm and filters of muslin, metal, or paper. Urns operate on gas, electric, or steam power.

The following procedure should be followed when operating the coffee urn:

1. Rinse the coffee urn thoroughly with hot water before using.
2. Fill urn with fresh, cold water and heat to boiling.
3. Place clean filter into urn basket or fit clean bag into urn. (Filters may be paper, cloth, perforated plates, or wire screens.)
4. Pour correct amount of dry coffee into filtering device, spread evenly, and add water.
    a. If urn is not self-pouring, release a gallon of boiling water into a container and pour over dry coffee with a steady circular motion. Continue to add water until the correct amount is in the urn. Generally, water level is determined by water gauge.
    b. If urn is self-pouring, allow steam pressure to force hot water over dry coffee through a nozzle head, and watch water gauge to determine amount of water being added.
5. Hold temperature at 185° F. (85° C.) for amount of time required for coffee to brew.
6. Remove bag of grounds from urn, dump grounds immediately, wash bag thoroughly, and soak bag in cold water.
7. Release a gallon of coffee from the urn and pour back into top of urn, giving a mixing action to produce a unified blend.
8. Check temperature gauge again, and maintain a temperature of 185° F. (85° C.) until coffee is served.

The areas of the coffee urn which require special care in cleaning are faucets, glass gauges, urn bags, and metal filter baskets. The coffee urn should be cleaned immediately after each brewing. To clean the coffee urn:

1. Brush inside walls well using hot water. Rinse urn until hot water runs clean and clear. Rinse inside of cover.
2. Unscrew top of glass gauge, brush, and rinse.
3. Remove and clean cap at end of faucet; scrub pipe leading from center of urn. If faucet has no caps, take it apart. Scrub spigot and rinse thoroughly with hot water.
4. Place several gallons of fresh water in urn; leave cover slightly ajar.
5. Empty and rinse urn before using.

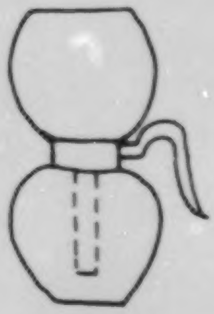
Twice a week, the urn should be cleaned more thoroughly by the following procedure:

1. Fill outer jacket 3/4 full of water and turn on heat; fill urn jar 3/4 full of water and add cleaner according to manufacturer's directions.
2. Clean gauge, faucet, pipes, plugs and other parts with long thin brush and cleaner. Take faucet apart, clean well, rinse thoroughly, and reassemble.
3. Scrub and rinse inside of urn three or four times with hot water; continue until all traces of cleaning solution are removed.
4. Check spray heads to see that all holes are open; use stiff wire to open any clogged holes.
5. Leave a few gallons of fresh warm water in urn until next use. It is important that water is warm, since cold water may crack hot liner.
6. Empty urn and rinse before use.

Some pointers to keep in mind when cleaning filters, urn bags, and baskets are the following:

1. Rinse new bags or cloth filters with water at 140° F. (60° C.) to remove sizing.
2. Rinse in hot water after use. (Do not use soap, bleach, or detergent, as they affect the flavor of brewed coffee.)
3. Store in clean container of fresh, cold water when not in use to prevent urn bags or filter cloths from becoming rancid or picking up food odors.
4. Replace bags or filter cloths if undesirable odor persists.
5. Rinse urn basket after each use and clean thoroughly at end of day.
6. Scour with cleaner and stiff brush. Never use steel wool or abrasive.
7. Rinse urn basket thoroughly after cleaning.
8. Guard against pits, small nicks, and scratches which may catch dirt or coffee deposits.

VACUUM COFFEE MAKER



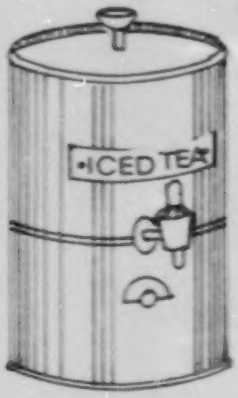
The vacuum coffee maker has a glass or metal upper bowl and a glass or metal lower bowl. The neck of the upper bowl fits through the opening of the lower bowl to form a tight seal. Vacuum coffee makers range in size from a single burner unit to a terraced unit with eight burners and decanters. The decanters hold 10-12 cups, or 1/2 gallon of coffee.

To operate the vacuum coffee maker, fill the lower bowl to the correct level with fresh cold water and place the coffee maker on the heat. Rinse the clean filter cloth in cold water; place the cloth over filtering device in the top bowl. Pour the measured coffee into the top bowl. Place the top bowl firmly into lower bowl when the water begins to boil and twist the top bowl slightly. Allow water to be forced up into the top bowl. Stir the water in the top bowl for 30 seconds. Allow the water to contact coffee for 2 to 4 minutes. Reduce the heat to create a vacuum in bottom bowl. The vacuum pulls the brewed coffee down through the filter. When the brew has filtered back into the lower bowl, remove the upper bowl and the grounds. Set the brew over the heat to maintain a 185° F. (85° C.) temperature.

Clean vacuum coffee makers after each use. Use a brush to scrub all parts of the top and lower bowl. Rinse the bowls, filter parts, and filter cloths thoroughly. Keep the filter cloth in cold water when the cloth is not in use. Twice a week soak all parts in a cleaner. Scrub and rinse the coffee maker well until all coffee deposits are removed. Clean the hot plates used for holding the pots with a damp cloth and dry them.

The proper cleaning of equipment is necessary to produce a cup of coffee of high quality. Deposits in the equipment ruin the flavor of the coffee. Some of these deposits are not visible, but they are in the form of a thin film of oil which can cause an "off-flavor" in the coffee. Proper cleaning supplies and equipment should be used, and cleaning should be done by an experienced employee.

TEA URN

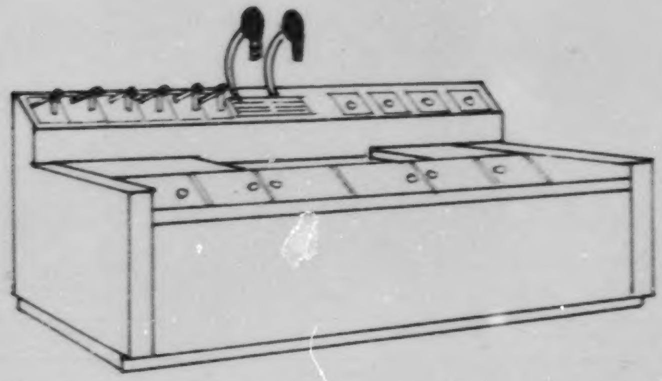


In food service, tea is usually prepared in small tea pots. Use a clean china, porcelain, pottery, or stainless steel teapot when brewing tea. Avoid using metallic pots, as they give a metallic taste to the tea. Rinse the container with hot water to pre-heat the container before adding the tea.

A tea-making machine is available now in many food service establishments. This machine combines powdered tea with freshly boiled water and dispenses fresh tea at the touch of a lever.

Clean the tea urn daily. Flush the empty urn with clear water. Scrub and wash all parts of the urn with hot water and a cleaner recommended by your training supervisor. Take the faucet apart, clean well, rinse thoroughly and reassemble. Clean the faucet each time the urn is cleaned because deposits which give the tea a bitter taste accumulate in the faucet. Rinse the urn with fresh water. Invert the tea urn and let it air-dry. Delime (clean by using a warm deliming solution) the tea urn once a week to remove any mineral deposits that may have accumulated.

PUMPS AND DISPENSERS



In the food service industry, pumps and dispensers are an important part of counter service equipment. Pumps and dispensers are found on soda fountains for syrups and toppings, on soft drink fountains, on milk dispensing machines and for hot or cold beverages on serving carts.

The fountain units containing the pumps and dispensers are available in various sizes. The larger units contain storage for ice cream, dispensers for syrups, soda (carbonated water), water, and various soft drinks. The smaller units may contain only the water, soda, and syrup dispensers. The size of the fountain unit varies with the food service establishment.

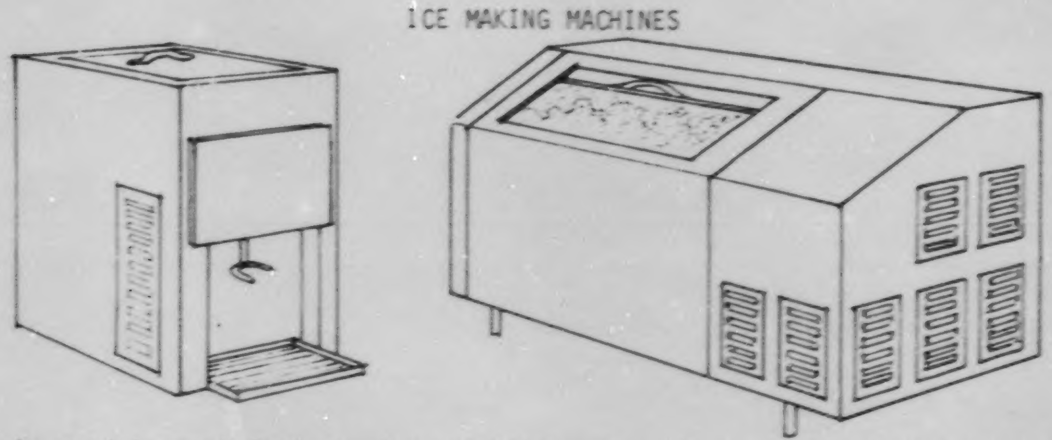
Clean the cream and milk pumps and dispensers daily. To clean pumps or dispensers, empty and rinse them with lukewarm or cold water. Avoid using hot water to rinse the pumps or dispensors, as the hot water sets the milk residue and the dispenser or pump is harder to clean. After rinsing, brush the surface of the dispenser or pump with a cleaning solution and rinse it with clean water. Soak the dispenser or pump in a sanitizer-cleaner for the time specified on the product label. Drain the solution from the equipment and air dry. Twice a month, apply an acid product solution to remove protein build-up or milkstone from the milk pump or dispenser. Rinse the equipment with warm water, sanitize, and air-dry.

Some food service establishments use syrup and soft-drink dispensers which connect a tube from the dispenser to faucets or draft arms on the counter. Many carbonated drinks, such as lemon, lime, orange soda, and others known by brand names, are available as syrups in their own dispenser units. The flavoring syrup is mixed with soda water according to the directions on the bottle of the syrup. Carbonated soft drinks are available in individual portion bottles and cans and in quart-size containers. Soda water is also available in a dispenser unit. Opened containers of carbonated drinks may lose their carbon dioxide and have a flat taste. They should be kept cold, as refrigeration helps to keep the carbonation in opened soft drinks.

Fruit juices are used in the fresh state as well as in concentrated forms. Some fresh juices are available in a pasteurized form in quart and gallon sizes. Many of the fruit juices are available in dispenser units.

It is important to follow the manufacturer's directions for the use and care of dispensers where you are employed. Keep this equipment thoroughly clean. If it is not clean the equipment can accumulate food particles and other soil that supports the growth of bacteria. Keep the counter and work area around the dispensers clean and sanitary at all times. Wipe up spills immediately.

ICE MAKING MACHINES



Ice is used in most food service establishments. Ice machines that make cubes, flaked ice, and cracked or chipped ice are available. Ice machines vary in sizes, producing from 100 to 5,000 pounds of ice per 24 hours. There are ice machines that produce individual portions for self-service operations. Some ice-making machines are combined with the water coolers and the soft drink dispenser units.

The exterior of the ice miking machine should be cleaned daily with a damp cloth. Dry and polish the machine with a soft cloth. Periodically defrost the ice maker according to the manufacturer's directions. To clean the interior of the ice maker, wipe the inside with a cleaning solution. Rinse the interior with room-temperature water and air-dry.

Use a scoop to remove ice from the bins of the ice-making machine. When the scoop is not in use, store it in a sanitary manner to protect it from water splashes, dust, and other contamination. Keep the lid to the bin closed for sanitary purposes and to prevent excessive changes in temperature. If a glass is broken in the ice used for beverages, melt the ice completely with hot water and drain the bin. Carefully examine the bin before placing fresh ice in the bin.

QUESTIONS:

Certain equipment and supplies are needed in cleaning a coffee urn. In Items 1-3, select the appropriate letter indicating the frequency of use for the equipment and supplies.

EQUIPMENT AND SUPPLIES	FREQUENCY OF USE
_______1. Cleaner	a. After each use
_______2. Brushes	b. Twice weekly
_______3. Hot water	c. Both a and b

Place an X in the blank by the letter of the phrase that best completes the sentence.

4. New coffee urn bags or cloth filters should be rinsed with water at 140° F. (60° C.) to
   _____a. kill bacteria.
   _____b. remove sizing.
   _____c. make colorfast.

5. After using a cloth or bag filter in the coffee urn,
   _____a. rinse the filter in hot water.
   _____b. rinse the filter in strong bleach.
   _____c. don't rinse the filter.

6. To prevent the bag or cloth filter from becoming rancid,
   _____a. hang the filter on the line in fresh air.
   _____b. store the filter in a clean container with fresh cold water.
   _____c. soak the filter in water to which detergent has been added.

7. Urn bags or filters should be replaced
   _____a. when they become stained.
   _____b. after each use.
   _____c. when undesirable odors persist.

8. The urn basket should be cleaned at the end of the day with
   _____a. an urn cleaner and a stiff brush.
   _____b. steel wool.
   _____c. an abrasive cleaner.

9. The vacuum coffee maker should be cleaned after each use with
   _____a. bleach and hot water.
   _____b. an abrasive cleaner and a brush.
   _____c. a brush and hot water.

10. The vacuum coffee maker needs to be cleaned twice weekly by
   _____a. soaking all parts in a cleaner.
   _____b. scrubbing all parts with steel wool.
   _____c. soaking all parts in a strong bleach.

11. The coffee urn should be filled with
   _____a. hot tap water.
   _____b. fresh, cold water.
   _____c. distilled water.

12. Used coffee grounds should be
   _____a. dumped immediately after the coffee is brewed.
   _____b. set aside for second use.
   _____c. left in the urn until it is ready to clean.

13. Drawing or releasing a gillon of the brewed coffee and pouring it back into the urn is done to
_____a. cool the brewed coffee.
_____b. improve the flavor by adding air.
_____c. improve the flavor by giving the coffee a unified blend.

14. Filter cloths for coffee makers should be rinsed in
_____a. detergent and bleach.
_____b. cold water.
_____c. a strong soda solution.

15. Filter cloths are placed over the filtering device in
_____a. the lower bowl of the vacuum coffee maker.
_____b. both bowls of the vacuum coffee maker.
_____c. the top bowl of the vacuum coffee maker.

16. When the top bowl is placed on the lower bowl of the vacuum coffee maker, the water in lower bowl should be
_____a. boiling.
_____b. hot.
_____c. cold.

17. Water is forced from the lower bowl up into the top bowl by
_____a. heat.
_____b. cold.
_____c. gravity.

18. When the water has been in contact with the coffee for the correct length of time, one should
_____a. remove the filter.
_____b. increase the heat.
_____c. reduce the heat.

19. The brewed coffee will return to the lower bowl of the vacuum coffee maker because of the
_____a. density of the brew.
_____b. vacuum created in the lower bowl.
_____c. temperature in the lower bowl.

20. After the coffee returns to the lower bowl, the upper bowl should be
_____a. left in place.
_____b. removed.
_____c. twisted slightly to insure a tight fit.

21. Why is cleanliness of the coffee maker essential?

22. Why should you avoid using metallic pots when preparing tea?

23. Why should you avoid using hot water to rinse the cream and milk pumps or dispensers?

24. List three carbonated drinks:
    a.
    b.
    c.

25. What may happen to opened carbonated drinks that are not refrigerated?

26. Name three types of ice used in food service establishments.
    a.
    b.
    c.

27. How should ice be removed from bins?

28. What should be done if a glass is broken in the ice bin?

ASSIGNMENT:

I. List the types of beverage equipment used at your training station. Outline the procedures used to prepare coffee and tea.

GROUP WORK:

I. Compare the beverage equipment used in your training station with equipment used by other food service employees.

II. View a film on brewing coffee, the procedures for making coffee, trouble spots, and equipment. Compare the procedures shown in the film with the ones used at your training station.

UNIT VI-4

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

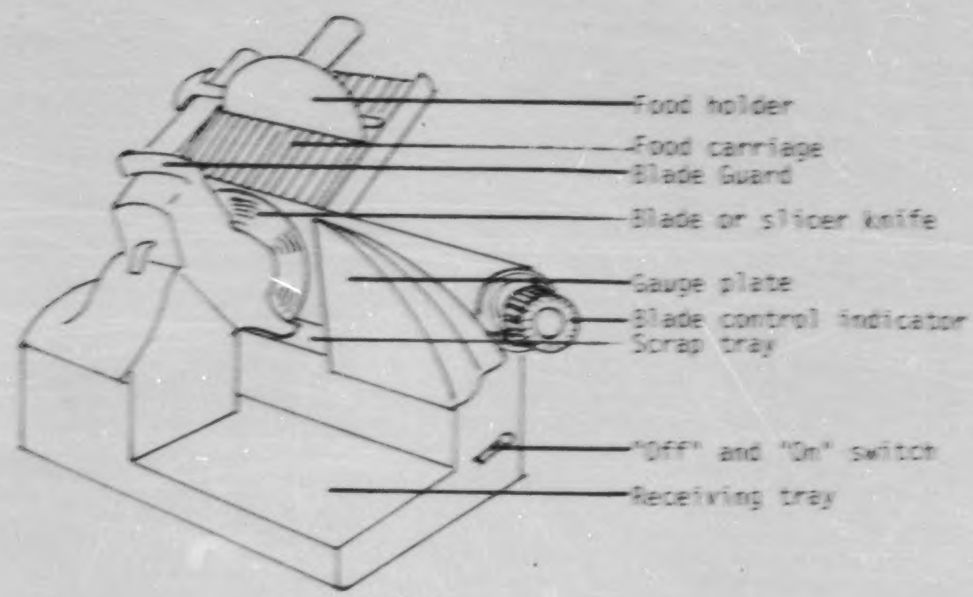
SUBJECT: Food Cutting Equipment

TASK: 12. Select and correctly use proper piece of equipment for a specified job in food preparation and service.

OBJECTIVES: When you finish this lesson, you should be able to

a. identify parts of food cutting equipment
b. describe procedure for operation of food cutting equipment
c. list safety precautions related to use of food cutting equipment.

FOOD SLICER


Food holder
Food carriage
Blade Guard
Blade or slicer knife
Gauge plate
Blade control indicator
Scrap tray
"Off" and "On" switch
Receiving tray

The food slicer is used for slicing meats and cheese. Fruits (apples, oranges, lemons, etc.), vegetables (tomatoes, cabbage, onions, celery, etc.) and bread may be sliced by the food slicer. The food slicer can be used for cutting hot or cold foods.

HOW TO OPERATE A FOOD SLICER

CAUTION: Instructions given below are general; read and follow manufacturer's directions carefully.

WHAT TO DO	HOW TO DO IT
1. Put plug into socket.	1. Plug in. NOTE: Be sure cord is dry and free from grease to avoid short circuits. Be sure that hands are dry to prevent shock.
2. Adjust indicator.	2. Adjust blade control indicator for desired thickness of slice.
3. Place food in carriage.	3. Place food in the food carriage. Hold food firmly in place using food holder.
4. Start motor.	4. Turn switch on.
5. Slice food.	5. Using handle, move carriage back and forth across blade. NOTE: Develop a rhythmic motion; do not bang carriage.

Cautions and Guides In Operating A Food Slicer

The operation of a food slicer varies according to the make and model. Follow the manufacturer's instructions to obtain the best performance from the slicer and to assure the long life of the machine.

1. When cleaning a slicer, do not let water come in contact with the motor or electrical wiring.
2. Never use slicer when blade guard is off.
3. Always keep hands away from blade when machine is in operation.
4. Keep plug out of socket when machine is not in use. Be certain guard is on slicer before putting plug in socket.
5. Make certain hands are dry before operating slicer.
6. Always make certain switch is off and plug pulled out of socket before cleaning slicer.
7. When disconnecting slicer, always pull the plug, never the cord.
8. Never use metal instrument to scrape off food particles from slicer knife, as nicked blade tears food.
9. Be sure cord is dry and free from grease.
10. Do not use very hot water or steam in cleaning slicer, as too much heat may dry lubricants in important parts.
11. Keep blades sharpened according to minufacturer's instructions.

How To Clean A Food Slicer

CAUTION: Instructions given below are general; read and follow manufacturer's directions carefully.

Daily Cleaning:

1. Remove electric cord from socket. Set blade control indicator at zero. Remove parts following manufacturer's instructions.

2. Wipe gauge plate with hot detergent solution. Rinse and dry. NOTE: Keep clear of blade edge. Wipe entire blade with heavy cloth, folded and dampened with hot detergent solution. Wrap cloth around long-handled hook, if provided. (Wipe from center toward edges of blade.) Rinse and dry blade with clean heavy cloth.

3. Wash blade guard in hot detergent solution. Rinse and dry. NOTE: Replace blade guard immediately to prevent injury.

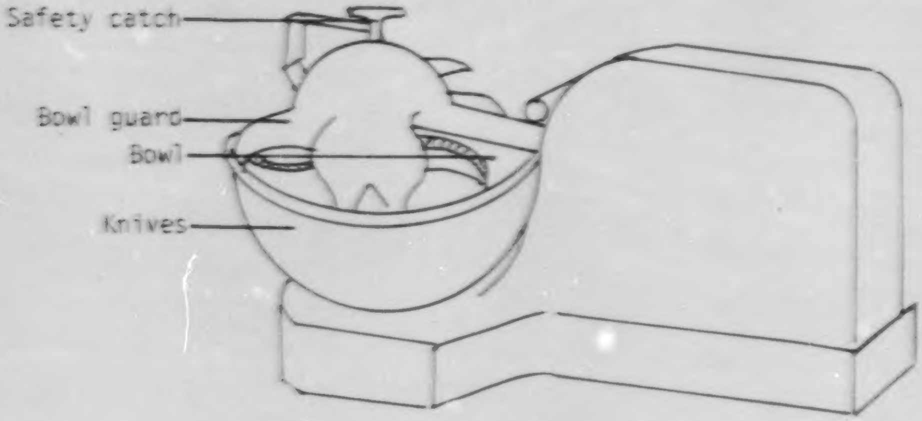
4. Wash other parts in hot detergent solution. Rinse and dry.

5. Wash all surfaces with hot detergent solution. Clean under blade with damp cloth. (Push cloth under blade, using long-handled hook, if provided.) Rinse and dry. Clean area under slicer.

6. Replace parts following manufacturer's instructions.

7. Cover with plastic or clean towel.

FOOD CUTTER OR CHOPPER



HOW TO OPERATE A FOOD CUTTER OR CHOPPER*

CAUTION: These instructions are general. Read and follow manufacturer's directions carefully.

WHAT TO DO	HOW TO DO IT
1. Inspect Cutter.	1. See that machine is assembled completely with all parts securely in place. Where clamp nuts are used, see that they are turned to hold bowl guard in place.
2. Start motor.	2. Push "Start" button or move switch to "Start."
3. Fill bowl.	3. Feed food into bowl gradually. Never fill bowl over 2/3 full. Never use fingers to push food under blades. Moving in the direction opposite to bowl rotation, scrape food down with large spoon from outer edge toward bottom of bowl to insure uniform cutting.
4. Remove food.	4. Push "Stop" button or move switch to "Stop" position. Wait for knives to stop rotating. CAUTION: Knives will continue to rotate rapidly several seconds after machine is turned off. Throw safety catch. Remove food from exposed part of bowl. Raise guard and remove remaining food.

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*U.S. Department of Agriculture. Training Course Outline on the Use and Care of Equipment. Washington, D.C.: U.S. Government Printing Office, 1960. pp. 59-62.

WHAT TO DO	HOW TO DO IT
5. Prepare for next operation.	5. Hold knives to prevent rotation and wipe blades cautiously. Wipe out bowl. Rinse knife guard, dry, and replace. Tighten clamp nuts and levers for next operation. Leave safety catch in disengaged position.

SAFETY PRECAUTIONS

1. Never put hands in bowl when the cutter is in use.
2. Wait until knives have stopped revolving before removing food or cleaning.
3. Do not overload bowl; fill 2/3 full.
4. Use large spoon rather than hand to guide food into cutters; move spoon in direction opposite to bowl rotation.
5. Do not use cutter for cutting meat with bones or gristle; to do so damages knives and gears.
6. After cleaning cutter, make sure knives are replaced in the proper position.

How To Clean A Food Cutter Or Chopper

CAUTION: Instructions given below are general. Read and follow manufacturer's directions carefully.

DAILY CLEANING:

1. Push switch to "Off" position. DANGER: WAIT FOR KNIVES TO STOP REVOLVING. Release safety catch holding bowl guard in place. Lift guard and remove.

2. Unscrew wing nut and remove blades from motor shaft. Clean cautiously and carefully with hot detergent solution, using dish mop or sponge with handle. Rinse and dry.

3. Remove all food particles, paying particular attention to area around guard. Wash with hot detergent solution. Rinse and dry.

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*U.S. Department of Agriculture. Training Course Outline on the Use and Care of Equipment. Washington, D.C.: U.S. Governemnt Printing Office, 1960. pp. 59-62.

4. If bowl is removable, remove and wash other parts. If bowl is fixed, wipe out food particles and clean with hot detergent solution. Rinse and dry.

5. Wash small parts in hot detergent solution. Rinse and dry.

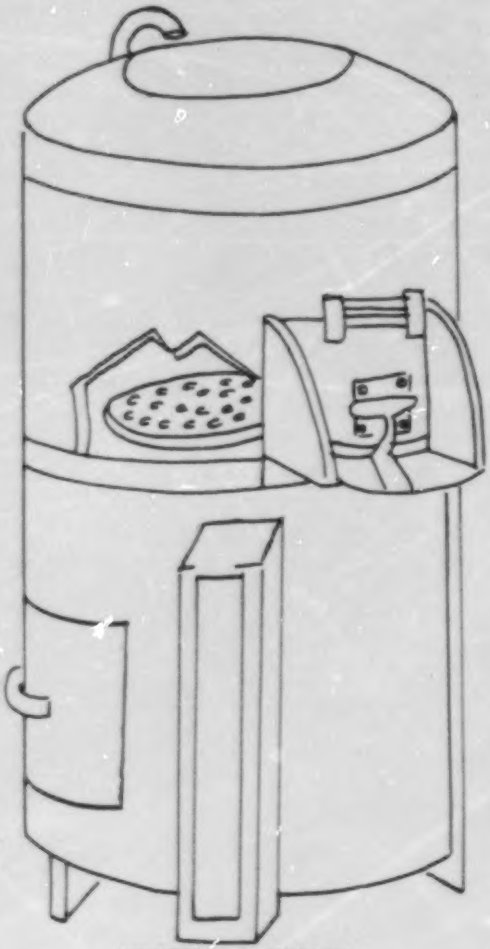
6. Replace guard. Attach bowl to base. Reattach knife blades to shaft. Drop guard into position.

7. If bowl is not removable, clean under surface. Wash table or pedestal with hot detergent solution. Rinse and dry.

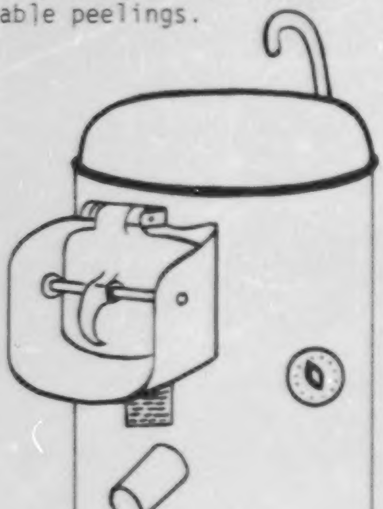
VEGETABLE PEELER

The mechanical vegetable peeler is used in quantity food preparation to peel such vegetables as white potatoes, sweet potatoes, carrots, and parsnips. It is also used to size potatoes.

Peelers are available in various sizes ranging from the large stationary size to the small portable size. A drain and a water source must be located near the vegetable peeler. The permanently installed vegetable peeler is attached to the floor and is usually located next to the vegetable sink. Drainage should be adequate to handle the vegetable peelings.



VEGETABLE PEELER



PORTABLE POTATO PEELER

The portable potato peeler is inexpensive and satisfactory for a small school or business. It may be used anywhere that water and an electrical outlet are available.

To operate the peeler, sort and separate the vegetables according to use. Place the abrasive disk firmly in place and insert the strainer bucket into the peel trap. Check to be sure that the discharge door is closed. Use the control motor to start the switch and then turn on the water. Fill the cylinders about 2/3 full with vegetables. Do not overload. Allow from 45 to 90 seconds for peeling time. Empty peel trap when it becomes 2/3 full by shutting off the water valve, opening the discharge door, and letting vegetables tumble into the sink or a container of cold water. Close the door, reload the cylinder, and continue the operation until all vegetables are peeled.

Clean the cylinder immediately after use so that no peeling particles dry and stick to the surface. To clean the peeler, remove the cover and peeling disk. Wash the interior of the peeler with hot water and scrub the interior with a stiff brush. The interior may be rinsed with a soda solution to remove odors. Leave the discharge door open so the interior will dry. Clean the peel trap by removing the peel trap cover, the strainer basket, and the stopper; and then flush the interior with hot water. Leave the trap cover open to dry. Clean the parts (the cover, peeling disk, peel trap cover, strainer basket, and stopper) with a stiff brush and hot water. Let the parts air dry. Wipe the exterior with a damp cloth. Periodically lubricate the motor according to manufacturer's instructions.

Guides for Using Vegetable Peeler

1. Do not let water come into contact with the motor or electrical wiring.
2. Do not put your hand inside peeler while peeler is in operation.
3. Never load the peeler without turning on the motor and water.
4. Load the machine to exact capacity. Underloading or overloading the machine reduces efficiency.
5. Do not peel excessively. This results in waste and bruising of vegetables.

QUESTIONS:

1. What two safety measures should be followed when plugging in the food slicer?
   a.
   b.

2. When the food slicer is not in use, it should be ______________________.

3. Where should the blade control indicator be set before parts of the food slicer are removed?

4. What kind of solution is used for cleaning the blade and other parts of the food slicer?

For each function listed locate the part of the food slicer associated with it. Place the number corresponding to your choice in the blank to the left of each item. Use a number only once.

Function

5. _____Starts and stops the food slicer
6. _____Holds food while it is being sliced
7. _____Regulates thickness of the slice of food
8. _____Holds the scraps
9. _____Tells number of slices per pound
10. _____Holds the sliced food
11. _____Cuts the food
12. _____Provides safety when slicing food
13. _____Pushes food against blade

Part of Food Slicer

a. Blade control indicator
b. Blade guard
c. Blade or slicer knife
d. Food carriage
e. Food holder
f. Gauge plate
g. "On and Off" switch
h. Receiving tray
i. Scrap tray

14. When operating a food chopper, what two things should be checked before the motor is started?
    a.

    b.

15. a. How should food be fed into the food chopper?

    b. How full should the bowl be filled?

    c. What safety precaution should be observed when filling the bowl?

16. What can be done to insure uniform cutting when using the chopper?

17. Why would it be dangerous to remove food from the chopper immediately after the "Stop" button is pushed?

18. What needs to be done to the chopper after the food is removed?

19. a. What should be used to guide food into the cutters of the chopper?

b. In what direction should food be guided?

20. Why should meat with bones or gristle not be cut in the food chopper?

21. What are the steps in reassembling the food chopper after it has been cleaned?
a.
b.
c.
d.

22. Vegetable peelers may be portable or ______________________________.

23. A portable peeler requires ______________________________ and an electrical outlet for operation.

24. Vegetable peelers may be used to peel white potatoes, ____________________, ____________________, and ____________________.

25. Before operating a vegetable peeler, check to see that the ______________ ________________ disk is in place.

26. Fill the peeler about ____________________ full of vegetables for most efficient operation.

27. The time required for peeling vegetables in a mechanical vegetable peeler is ____________________.

28. It is important to load the vegetable peeler at exact capacity because ______________________________.

ASSIGNMENT:

I. Refer to safety precautions to be observed when operating a food slicer. What procedures were violated in the following situation?

Mary was assigned to the job of cleaning the meat slicer. She checked to see that the switch was off and pulled the cord to unplug the slicer. She used very hot water to clean the frame of the slicer and was careful not to let the water come in contact with the motor. Some food particles were still on the slicer knife so she used a knife to remove them.

GROUP WORK:

I. Make posters to illustrate the safety precautions related to the use of food cutting equipment. Display the posters at your training station with your employer's permission.

UNIT VI-5

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

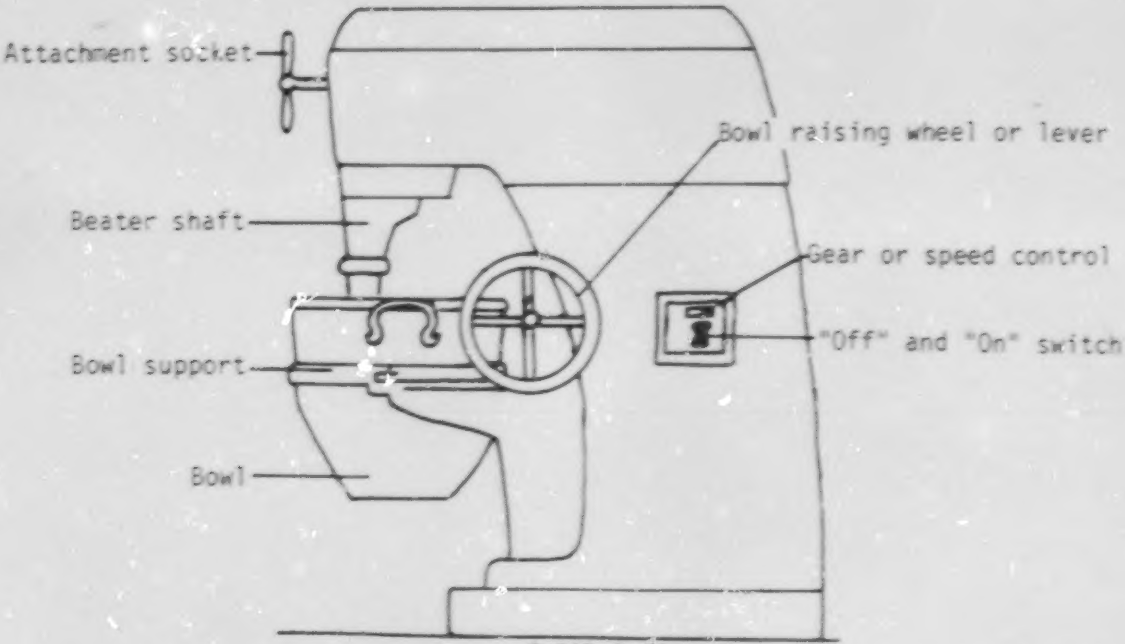
SUBJECT: Mixing Equipment

TASK: 12. Select and correctly use proper piece of equipment for a specified job in food preparation and service.

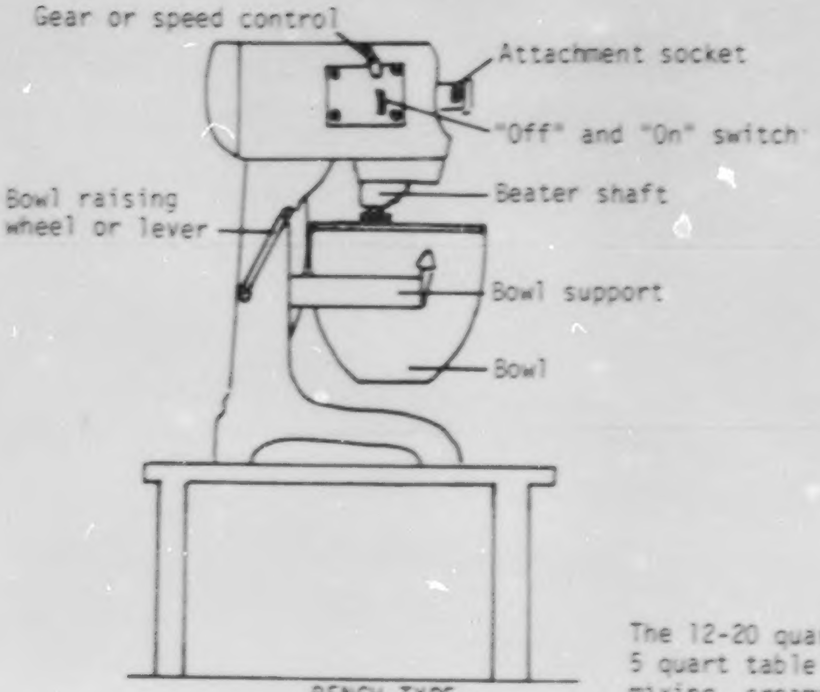
OBJECTIVES: When you finish this lesson, you should be able to
- a. identify parts of a mixer and their functions
- b. describe procedure for operation and care of a mixer
- c. list safety precautions related to use of a mixer
- d. identify parts of a blender
- e. list techniques in caring for blender and safety precautions to observe.

MIXER

The 30-60 quart floor model mixer is used for mixing and blending ingredients or for incorporating air into the product.


Attachment socket
Bowl raising wheel or lever
Beater shaft
Gear or speed control
"Off" and "On" switch
Bowl support
Bowl

FLOOR TYPE


Gear or speed control
Attachment socket
"Off" and "On" switch
Bowl raising wheel or lever
Beater shaft
Bowl support
Bowl

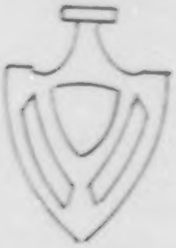
BENCH TYPE

The 12-20 quart bench model and the 5 quart table model are used for mixing, creaming, or beating ingredients for cakes, batters, doughs, pastries, or meringues.

Uses for Beaters and Whips (Agitators)

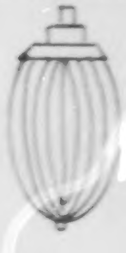
Flat Beater--Use for general mixing, never use for heavy doughs.

1. Mixing main dish items such as ham-bean loaf, fish cakes, and hamburgers.
2. Mashing vegetables such as potatoes and squash.
3. Creaming mixtures such as butter and sugar, uncooked icings, honey butter, and sandwich spreads.
4. Mixing batters such as muffins, cakes, and steamed puddings.
5. Blending mixtures such as pastry and biscuits.



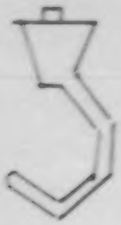
Wire Whip--Use for incorporating air into light mixtures; never use for heavy mixtures.

1. Blending dry mixes.
2. Whipping dry milk.
3. Reconstituting dry milk.
4. Beating egg whites.
5. Whipping cream.
6. Mixing light icings.



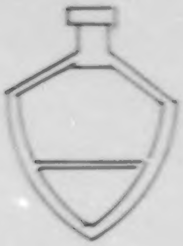
Dough Hook--Use for mixing heavy doughs requiring a folding and stretching action for best development.

1. Bread or rolls.
2. Biscuits.
3. Noodles.



Pastry Knife--Use for combining shortening and flour by a cutting action.

1. Biscuits.
2. Pie crust.
3. Shortcake.



Uses for Selected Attachments

Vegetable Hopper--The purpose of the vegetable hopper cover is to force the food through the hopper. The rotor in the hopper turns to force the food through the plate. Do not add food while the rotor is in motion, as fingers might get caught in the hopper.

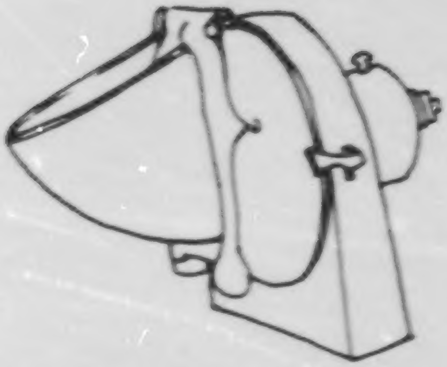
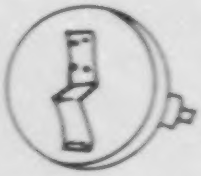


Plate attachments are available for use with the vegetable hopper.

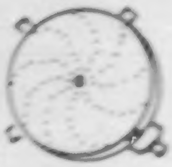
Slicer Plate



1. Slicing vegetables for salads and soups.
2. Slicing firm fruits, such as apples for salads.
3. Slicing other vegetables, such as potatoes for scalloping and cabbage for steaming.

HINT: Fasten a plastic bag to the machine to catch the food. The bag fills easily, stores easily in the refrigerator, reduces discoloration of vegetables, and keeps food moist.

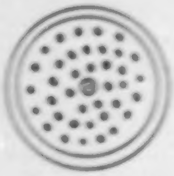
Grater Plate



1. Grating hard vegetables, such as carrots, parsnips, and turnips.
2. Grating dry bread for crumbs.
3. Grating hard cheese.

HINT: Use a stiff brush to clean the plates. Toast the bread to a golden brown before grating.

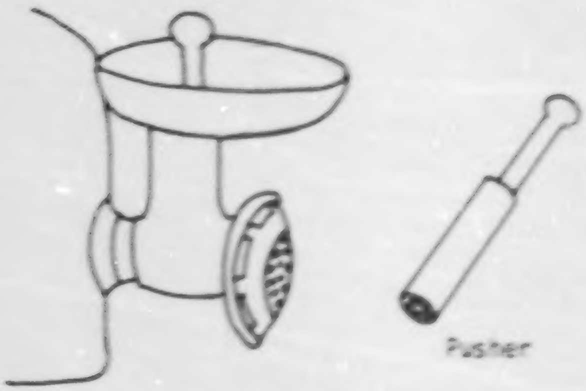
Shredder Plate



1. Shredding cabbage for coleslaw.
2. Shredding vegetables for soups and salads.

HINT: Shredding onions into a plastic bag reduces eye and nose irritation.

Meat and Food Chopper



1. Chopping or grinding raw or cooked meats.
2. Chopping vegetables and dry fruits.
3. Grinding dry bread crumbs.
4. Grating hard cheese.
5. Chopping hard-cooked eggs.

Use the pusher--never hands--to push the food through the chopper.

HINT: Put a piece of bread through the chopper after grating cheese.

How To Operate A Mixer

1. Select appropriate size bowl and place on bowl support. Fill bowl with ingredients 1/2 to 2/3 capacity for best results.
2. Select proper agitator or attachment for desired use and insert onto beater shaft. Fit slot in agitator shaft over pin extending from hub and adjust until shaft is in the locked position.
3. Raise bowl to desired height by means of bowl raising lever. The agitator should not touch bowl.
4. Check to see if speed selector is on low speed and then start machine.
   Belt driven machine: Adjust speed control and switch to "On" position.
   Gear driven machine: Be sure gear is in neutral. Press start button and set gear to speed required by recipe. It is advisable to start at speed 1, then adjust to higher speeds if necessary. IMPORTANT: For gear driven machine, always put clutch lever into neutral before changing speeds.
5. Select speed desired and mix required length of time.
6. Stop machine.
   Belt driven machine: Switch to "Off" position.
   Gear driven machine: Shift to neutral gear and push "Stop" button.
7. Use bowl raising wheel or lever to lower bowl.
8. Remove beater by turning it around until pin on hub slips out of slot in beater shaft. Remove bowl.

How To Clean A Food Mixer*

CAUTION: Instructions given below are general. Read and follow the manufacturer's directions carefully.

Daily Cleaning:

1. Immediately after use, clean bowl support, beater shaft, shell, and base with hot detergent solution. Rinse and dry with clean paper towels. Scrape and brush out groove on beater shaft if necessary.

2. Wash bowl and beaters immediately after using (if egg mixtures or flour batters have been used, apply cold water before washing with hot water). Rinse and dry beaters thoroughly and hang up to prevent bending. Rinse and dry bowls thoroughly to prevent rusting.

Weekly Cleaning:
(to supplement daily cleaning.)

1. Clean entire mixer thoroughly following instructions for daily cleaning.

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*U.S. Department of Agriculture. Training Course Outline on Use and Care of Equipment. Washington, D.C.: U.S. Government Printing Office, 1960. p. 77.

Safety Practices For Use Of The Mixer

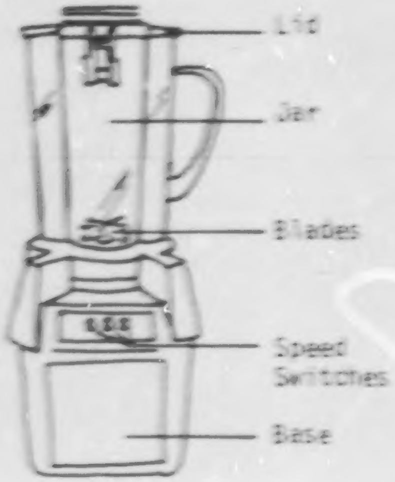
1. Select the correct bowl for the type of mixture and then select the correct beater or whip according to the bowl size and mixture.
2. Be sure to fasten the bowl and beater or whip securely before starting the motor.
3. Prevent spillage by starting the machine at low speed.
4. Do not put hands or spoons into the bowl while the mixer is in operation.
5. Always use a rubber scraper, flexible spatula, or long-handled spoon to scrape down the sides of the bowl and to remove food from the beater or whip.
6. Scrape down the sides of the bowl after the agitator has stopped.
7. Use mixing bowls for mixing only--do not put them on the range or in the oven.
8. If the mixer is used on a continuous basis, always allow time for the motor to cool. Most mixers operate at a capacity load for one hour without overheating or damaging the motor.
9. Remove agitators and attachments only when the motor has stopped.
10. Use bowls large enough to hold the food to be mixed without danger of it slopping over onto the floor.
11. Use a splash cover if bowls are filled over half full.
12. Do not use a container too heavy for you to handle safely by yourself unless wheeled equipment is available for moving the bowl and materials.
13. Should an overload occur, stop the machine and correct the condition before continuing with the job.
14. Be sure small utensils are not dropped into the bowl.
15. Do not wear loose clothing that may catch in the moving parts of the machine.

BLENDER

Blenders are used for high speed blending, pulping, mixing, or reducing of animal tissue, vegetables, or fruits.

Operation

1. Place jar on base (or assembly unit). Follow manufacturer's instructions in securing jar on base.
2. Place substances to be blended into jar.
3. Place lid on jar making sure lid is secured.
4. Connect cord.



5. Turn on switch and select desired speed for substances to be blended (see manufacturer's instructions).

NOTE: Speed may be changed without stopping machine.

6. Turn switch off as soon as ingredients reach the desired firmness or thickness. Ingredients are reduced to a similar mass almost immediately.

How To Clean A Blender

1. Remove jar from base. Wash and rinse using regular hand dishwashing procedure. Dry.

2. Wipe base with damp cloth after each use. Polish with dry cloth.

3. See manufacturer's instructions for further care, such as oiling.

Safety Practices for Use of the Blender

1. Do not drop spoons, spatulas, or scrapers into machine while motor is on.

2. Be sure lid is fastened tightly.

3. Do not put very coarse foods or large pieces of ice in jar.

4. Disconnect cord when machine is not in use.

QUESTIONS:

For each function listed, locate the part of the mixer associated with it. Place the letter corresponding to your choice in the blank to the left of each function. Use letter only once.

Function

_____1. Point where attachment is put on mixer
_____2. Part that raises or lowers the bowl
_____3. Container to hold food
_____4. Point at which beater is attached
_____5. Part that starts and stops the mixer
_____6. Part that adjusts the speed of the mixer
_____7. Part that holds the bowl

Part of Mixer

a. Beater shaft
b. Bowl
c. Bowl support
d. Bowl raising wheel or lever
e. Gear or speed control
f. "Off and On" switch
g. Attachment socket

For each task listed, locate the agitator associated with it. Place the letter corresponding to your choice in the blank to the left of each task. The letters may be used more than once.

Task

____8. General mixing
____9. Beating air into light mixtures
____10. Mixing heavy doughs
____11. Combining shortening and flour by a cutting action
____12. Mixing prune cake
____13. Making crust for apple pie
____14. Whipping 7-minute icing
____15. Mixing cinnamon rolls
____16. Making meringue for lemon pie
____17. Mixing biscuits
____18. Mashing squash

Agitator

a. Dough hook
b. Flat beater
c. Pastry knife
d. Wire whip

19. What is the blender used for?

20. List four safety precautions that should be observed when using the blender?
a.

b.

c.

d.

ASSIGNMENT:

1. Examine instruction booklets for information on the use and care of mixing equipment. What safety procedures are stressed in the instructions?

GROUP WORK:

1. With other food service employees, visit a bakery or other food service establishment and watch a demonstration on the use and care of mixing equipment.

UNIT VI-6

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Holding and Serving Equipment

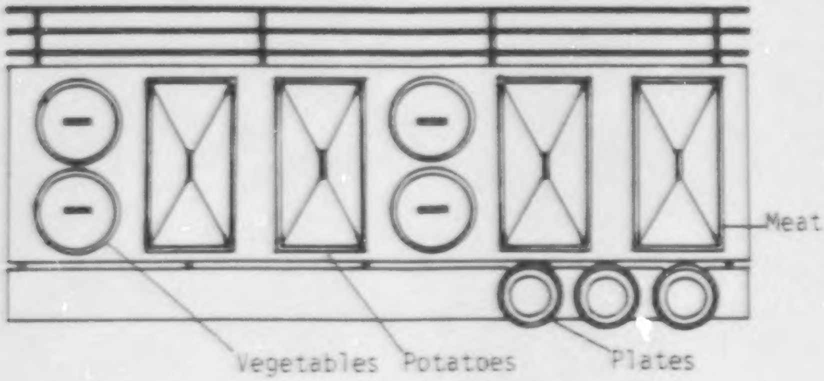
TASK: 12. Select and correctly use proper piece of equipment for a specified job in food preparation and service.

OBJECTIVES: When you finish this lesson, you should be able to

a. Identify holding and serving equipment and their functions
b. Describe procedures for the use and care of holding and serving equipment.

STEAM TABLE

Steam tables are used to keep foods hot and ready for immediate service. Arrange the food on the steam table in the order in which it will be placed on the plate. (See illustration for proper arrangement). Proper arrangement aids in serving food rapidly.



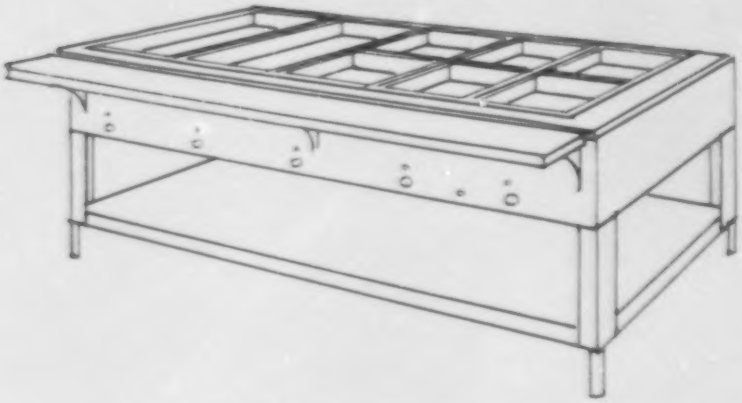
If the steam table is to be operated at maximum efficiency, certain principles should be remembered:

1. Water in the steam table tank should be kept at a temperature which will hold the food at a minimum temperature of 140° F. (60° C.) throughout the serving period. Under these conditions, the temperature of the steam table acts as a control over germs. If the temperature drops too low, however, the steam table affords ideal conditions for germs to grow: moisture, warmth, and food.
2. Water should be held at the proper temperature and not allowed to increase. If water boils or gives off excessive amounts of steam food become over-cooked and dry.
3. Containers should be covered when placed on the steam table, and they should remain covered until time to serve.
4. The water pan should be filled with hot tap water to save time and fuel.

Effective cleaning removes soil from equipment. It is important not only to be aware of proper cleaning procedures but also to know the "when" of cleaning. In applying the principles of sanitation, the time factor cannot be overemphasized. Cleaning immediately after use reduces the length of time during which bacterial growth may occur, and it also requires less time and energy. Keep in mind, therefore, that if the steam table is to be cared for properly, food particles should be removed promptly after service is completed.

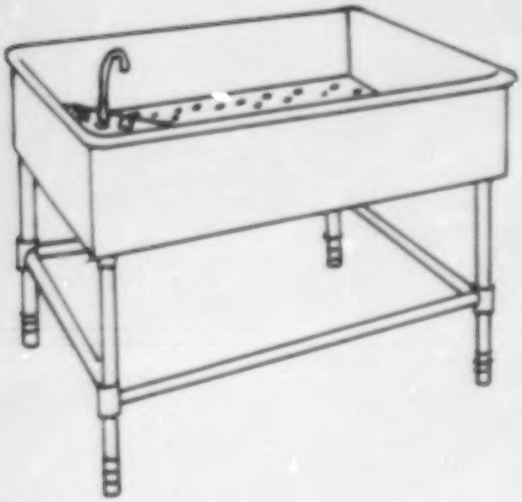
To clean steam table containers, scrape and pre-rinse to remove excess soil. Be sure to clean covers as well as containers. Wash, using hot (120° F. or 48.8° C.) water, detergent, stiff brush, and "elbow grease." Rinse in hot (140° F. or 60° C.) water. If necessary, sanitize the steam table containers by using hot (170° F. - 180° F. or 76.6° C. - 82.2° C.) water. Air-dry steam table containers. This is the most effective method because of the bacteria which is often on the drying towels. Drain and clean the water pan of the steam table often to prevent scale build-up. A periodic use of a mild acid, such as vinegar, can be used to remove scale from water. This treatment should be done when the table can be aired after a thorough rinsing to prevent the smell of vinegar the next time the table is used.

WATERLESS FOOD WARMER



The waterless food warmer allows different foods to be kept at proper storage temperatures, preserves the range-fresh flavor, and eliminates the waste of food. The storage temperatures required for different foods (meats, 145° F. - 150° F. or 62.7° C. - 65.5° C.; vegetables, 140° F. or 60° C.; thin soups, 180° F. or 82.2° C.; etc.) are maintained on the waterless food warmer by control valves and thermostats. The fully insulated compartments are separately heated, and there is no water pan. Some models of the waterless food warmer have removable spillage pans which speed cleanup time and improve sanitation.

BAIN-MARIE



The primary purpose of the bain-marie is to keep food hot at the service counter. It is not to be used for cooking or for continuing the cooking process. Foods which may be kept hot in a bain-marie are sauces, gravies, soups, and vegetables. Food containers should be kept covered and they should be deep enough to keep the water level from rising and spilling into the food.

During operation, a pipe is inserted into the water drain which is located in the center of the bain-marie floor. The bain-marie is filled with water to keep the containers hot. The water must not cause the containers to float, or spill into the food containers.

To insure correct temperature of the bain-marie, add the water and turn the controls on before serving time. As you turn on the water, set the steam switch at the "On" position. Be sure that you set the steam switch to the hot wells in the "On" position also.

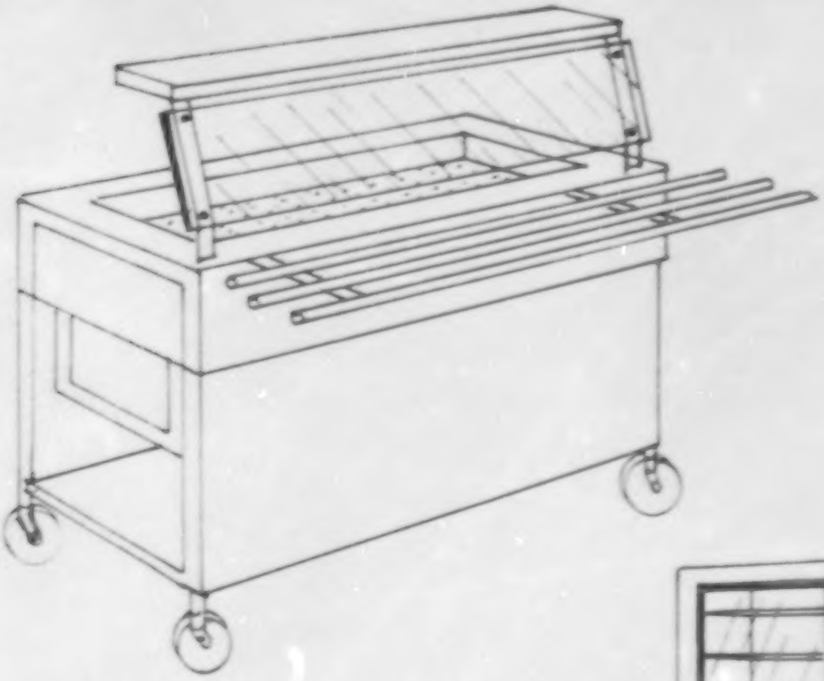
Take extra precautions to prevent burns while placing or removing the food containers in the bain-marie. Also take precautions when removing the pipe from the water drain.

Turn the steam switch to the "Off" position when the bain-marie is not in use. Drain the water from the bain-marie at the end of each serving period by lifting the pipe from the water drain.

Remove and thoroughly clean the metal bottom of the basin after use. If corrosion gathers on the bain-marie, remove the corrosion with suitable chemicals.

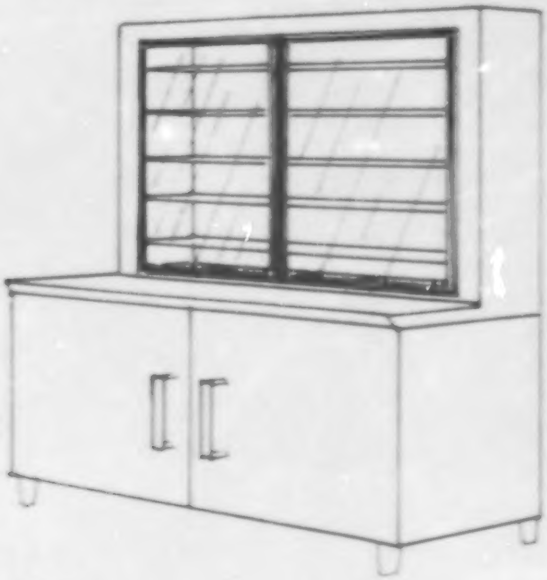
The cold food server is usually made of stainless steel and is sometimes called an ice bain-marie. It may be either stationary or portable. The purpose of this server is to keep cold food chilled. Before serving time the perforated inner liner is filled with crushed ice. The cold food is placed on this bed of crushed ice. As the ice melts, the water drips into the lower container.

The cold food server must be cleaned completely each day. Water is removed by means of a drain in the bottom and is carried away through a drain pipe. The ice is removed and the entire cold food server is washed with a detergent solution and a clean cloth. The perforated metal liner is easily removed for complete cleaning. The food service establishment has its own recommendation for a sanitizing product to use. The entire food server should then be completely rinsed and wiped dry. The cleaning of the cold food server may be the responsibility of the food service employee.



COLD FOOD SERVER

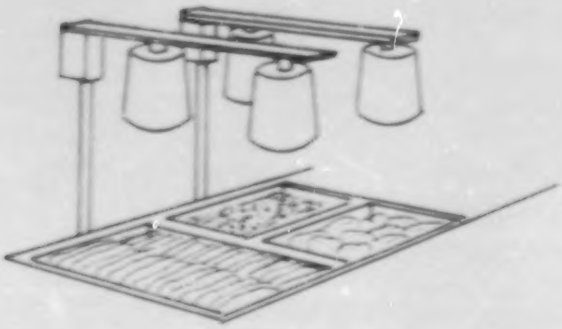
SALAD CASE



The salad case is a refrigerated cabinet with shelves for storage of salads. The salads can be made in advance and stored or displayed in the case. It is convenient in institutions where many people are served during peak periods.

Clean the salad case with a cloth and detergent-water solution, rinse, and dry with a soft cloth. Polish the exterior stainless steel if needed.

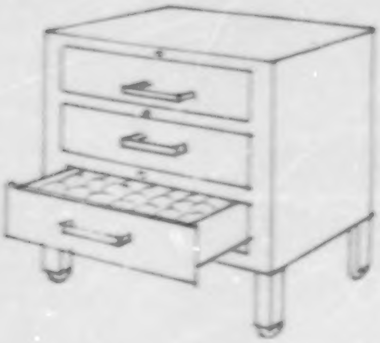
INFRARED LAMPS



Infrared lamps are used to keep foods warm. They are used on food displayed in a cafeteria or a buffet counter. The lamps are also used to keep food warm before the waitress picks the food up from the kitchen in a restaurant.

The lamps are available in various metals and may be a pull-down type or a stationary stem mounting. Let lamps cool before cleaning. Wash with a cloth and a mild detergent and water solution. Rinse and wipe dry with a soft cloth.

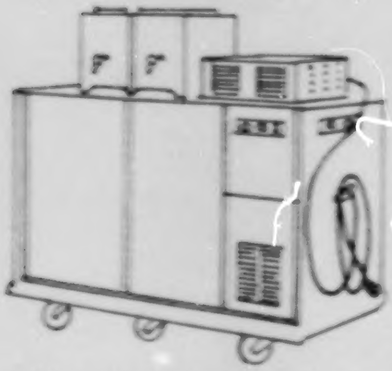
ROLL WARMER



The roll warmer is used for keeping a large quantity of breads and sweet rolls warm. The warmer has separate drawer compartments with individuil controls for each drawer. The roll warmer keeps bread from drying out and is an efficient method fsr holding hot breads prepared in advance.

After the unit cools, remove crumbs from compartment drawers. Wash the drawers with a soft cloth and a mild detergent and water solution. Rinse and wipe dry with a soft cloth.

HOT AND COLD CARTS



These carts usually have a 20-tray capacity and are usually used for tray delivery. They are enclosed carts with one side refrigerated and the other side heated. Trays with cold foods on them are placed in the refrigerated side; hot foods and cups for hot beverages are set in a drawer on a small tray in the hot side. Insultated jugs of coffee and tea may be set on top of the cart. Some models have beverage dispensers.

Another hot-cold cart uses divided trays, one section for cold foods and the other for hot. Rubber gaskets in the cart separate the two sections as the tray slides in. Trays are completed in the kitchen; no matching is needed at the service area, so possibility of error is reduced. Clean the carts daily. Brush off all loose soil. Be sure to clean out the corners of the carts. Wipe off the interior and the exterior of the cart with a damp cloth. Rinse and wipe dry with a clean cloth.

Water spots or a dull lime haze may appear on stainless steel carts. To remove the water spots or lime haze, apply a cleaning solution recommended by the manufacturer. Let the solution soak until the spots or haze disappear. Rinse with clear water and dry with a clean cloth.

THERMAL DISH TRAYS OR PLATE HOLDERS*

Metal dishes are heated in an oven and slid into a depression in a tray or plate holder. Mobile and self-leveling heaters for disks are available. The plate is set on the warming disk, then covered for delivery. Insulated individual containers are used for hot soups or beverages or iced desserts. The trays are complete when they leave the kitchen.

THERMAL TRAY SYSTEM*

Hot or cold foods are portioned into special containers which are then set into compartmental trays. Filled trays are stacked one on top of another to form a vertical hot column and a vertical cold column, using the temperatures of the foods themselves to maintain temperatures during delivery. A cover is placed over the top tray.

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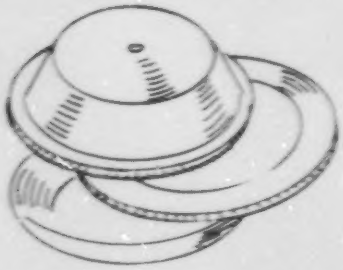
*U.S. Department of Health, Education, Welfare. A Guide to Nutrition and Food Service. Washington, D.C.: U.S. Government Printing Office, 1971. p. 101.

COMPOSITION PLATE HOLDER AND DOME COVER*



Composition plate holders and dome covers are used with tray delivery equipment. The plate holder and dome cover lock together to retain the temperature of food on heated plates. Insulated covered containers are needed for other hot foods. Chilled dishes are needed for cold foods.

QUESTIONS:

Place an X in the blank by the letter of the phrase which correctly completes the statements.

1. Food should be arranged on the steam table according to the
   _____a. color combinations.
   _____b. order in which it will be placed on plate.
   _____c. order in which it will be eaten.

2. Water in the steam table should be kept at
   _____a. 140° F. (60° C.).
   _____b. boiling point.
   _____c. a temperature to hold food at 140° F. (60° C.).

3. In order to prevent bacterial growth, the steam table should be cleaned
   _____a. immediately after the service is completed.
   _____b. after it has cooled.
   _____c. the same day it is used.

4. A steam table may be sanitized by using water at
   _____a. 120° F. (48.8° C.).
   _____b. 170° - 180° F. (76.6° - 82.2° C.).
   _____c. 140° F. (60° C.).

5. List three functions of the waterless food warmer.
   a.

   b.

   c.

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*U.S. Department of Health, Education, and Welfare. A Guide to Nutrition and Food Service. Washington, D.C.: U.S. Government Printing Office. 1971. p. 101.

Place an X in the blank to indicate whether the statement is True or False.

6. The bain-marie is used to cook foods.
_____a. True
_____b. False

7. The water level in the bain-marie should be lower than the food containers so that they do not float.
_____a. True
_____b. False

8. Steam switches on the bain-marie should be turned to "On" while the water is running.
_____a. True
_____b. False

9. Water should be drained from the bain-marie at the end of each day.
_____a. True
_____b. False

10. Extra care must be taken to prevent burns when placing or removing the food containers in the bain-marie.
_____a. True
_____b. False

11. The cold food server keeps the food chilled by the use of _______________.

12. The cold food server is cleaned daily with a __________________ solution.

For each function listed, locate the holding and serving equipment associated with it. Place the letter corresponding to your choice in the blank to the left of each function. Use each letter only once.

Function

_____13. Consists of a refrigerated cabinet with angle-slanted shelves for storage and display
_____14. Contains filled trays that are stacked in vertical hot and cold columns
_____15. Keeps large quantities of breads and sweet rolls warm
_____16. Contains insulated individual containers used for hot soups, beverages or iced drinks
_____17. Contains refrigerated and heated compartments for trays used in tray delivery
_____18. Locks together to retain temperature of food on heated plate
_____19. Keeps food warm that is displayed in a cafeteria or on a buffet counter

Holding And Serving Equipment

a. Composition plate holder and dome cover
b. Hot and cold carts
c. Infrared lamps
d. Roll warmer
e. Salad case
f. Thermal dish trays or plate holders
g. Thermal-tray system

ASSIGNMENT:

I. Prepare a chart on the pieces of holding and serving equipment used at your training station, showing their uses and the care required by each piece.

GROUP WORK:

I. With other food service employees, discuss the charts on the pieces of holding and serving equipment. Check to see if improvement can be made in your duties when using and caring for the holding and serving equipment.

UNIT XII-1

LARGE EQUIPMENT FOR COOKING FOOD

SUBJECT: Toasters

TASK: 13. Select and correctly use proper piece of equipment for cooking food.

OBJECTIVES: When you finish this lesson, you should be able to
a. describe procedures for using and caring for toasters
b. sumarize functions of toasters.

INDIVIDUAL TOASTER

Parts of the Toaster

The small electric toaster is a commonly used electrical appliance in food service establishments. The essential parts of the toaster include:

1. a heating element, which is insulated within a frame.
2. an appliance cord, which carries the current from the convenience outlet to the appliance.

Toasters vary in convenience features, such as removable crumb trays, toast ejectors, and regulators for degree of brownness.

Cleaning Procedures

Keep the toaster clean by wiping off the outside with a soft, damp cloth. If the toaster is greasy, use a non-abrasive cleaning compound. The cleaning compound and water should not touch the electrical element. Clean the crumb tray daily, observing the safety precautions listed below.

Safety Precautions

1. Always disconnect the cord when cleaning the toaster.

2. If a piece of bread becomes lodged inside, always disconnect the cord before attempting to remove the bread.

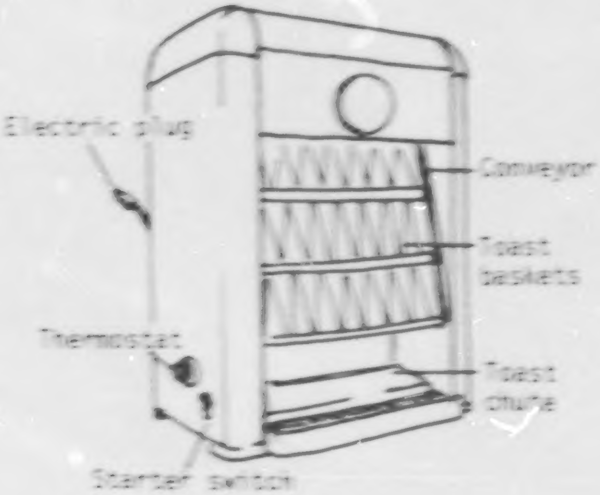
3. Be sure your hands are dry when operating the toaster.

CONVEYOR TOASTER

Conveyor toasters are used for toasting large amounts (approximitely one loaf) of bread at a time. Following are instructions for the safe operation and care of toasters.

Operation

1. Set starter switch at "Off."
2. Plug in electric plug.
3. Turn starter switch on and off to be sure conveyor runs smoothly.
4. Set thermostat dial at 7.
5. Preheat for 20 minutes.
6. Test run a few slices of bread.
7. Adjust thermostat dial as needed.
8. Place bread in toast baskets.



How To Clean A Toaster

Daily Cleaning:

1. Wipe outside.
2. Remove crumbs.
3. Remove toast chute and clean base.

Monthly Cleaning:

1. Use non-abrasive cleaning compound on outside.
2. Boil baskets.

Safety Practices For Use of the Toaster

1. Keep fingers clear of elements as toaster is loaded.
2. Remove plug from electrical outlet when toaster is not in use.

QUESTIONS:

Place an X in the blank by the phrase which correctly completes each statement below.

1. An essential part of the individual toaster is
   _____a. the heating element which is insulated in a frame.
   _____b. a series of transistors.
   _____c. an extension cord.

2. Convenience features of individual toasters include
______a. regulators for degree of brownness.
______b. removable crumb trays.
______c. toast ejectors.
______d. all of these.

3. Individual toasters should be kept clean by wiping off the outside with
______a. a soft, damp cloth.
______b. a soft, dry cloth.
______c. a soft, sudsy cloth.

4. If the individual toaster is greasy, clean it with
______a. a steel wool pad.
______b. a non-abrasive cleaner.
______c. a scouring powder.

5. When cleaning the individual toaster, the cleaning compound or water should not touch the
______a. regulator.
______b. crumb tray.
______c. electrical element.

6. When cleaning or working with the individual toaster, always
______a. be sure it is turned off.
______b. check the regulator.
______c. disconnect it.

7. When operating the individual toaster, be sure hands are
______a. dry.
______b. wet.
______c. oiled.

8. What daily cleaning should be given to the conveyor toaster?

9. What kind of cleaning compound should be used on the outside of the conveyor toaster for monthly cleaning?

10. Give two safety precautions to observe when using a conveyor toaster.
a.

b.

ASSIGNMENT:

1. Name the type of toaster used at your training station. List the procedure you follow in operating and caring for the toaster.

GROUP WORK:

1. With other food service employees compare the procedure for operating and caring for the toaster at your training station.

UNIT VII-2

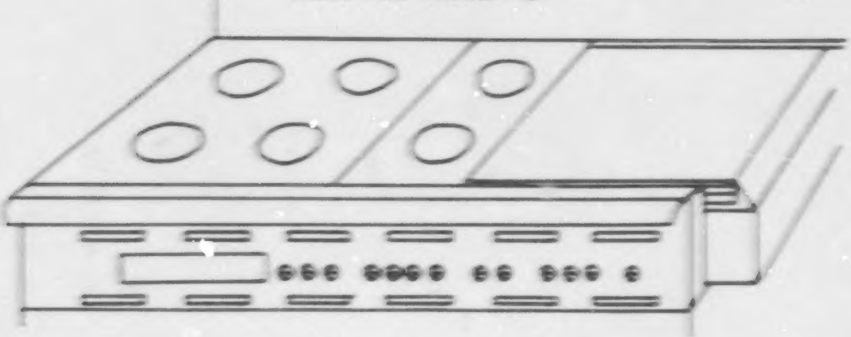
LARGE EQUIPMENT FOR COOKING FOOD

SUBJECT: Surface Cooking Equipment

TASK: 13. Select and correctly use proper piece of equipment for cooking food.

OBJECTIVES: When you finish this lesson, you should be able to
- a. summarize functions of the exhaust hood
- b. list techniques of caring for exhaust hood
- c. describe procedures for use and care of the grill
- d. explain procedures for use and care of broilers
- e. describe procedures for use and care of the deep-fat fryer.

ELECTRIC RANGE TOP

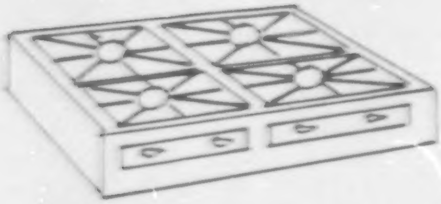


The electric range may have either a solid plate top or a coil top cooking surface. Because the solid top model requires a preheat period, the heat control should be turned on at the beginning of the food preparation. Instant heat is produced on many of the fast-cycling electric coil units, and a preheat period is unnecessary.

Electric range top units may be set at high, medium, or low. Use high only until the food starts to cook, then turn to medium or low. "Low" produces 1/4 and "Medium" 1/2 as much heat as "High." If the electric range has a thermostatic control, turn the switch to the exact setting for the temperature desired. The thermostatic control is an automatic device for regulating the temperature of the gas or electricity supply.

When turning on the heat controls, adjust only those for the portion of the range top to be used. Arrange pots on a solid top model so that they cover as much of the heated surface as possible. Pots on round units should cover the entire unit to make the best use of heat and to insure that the food cooks evenly. This procedure saves electricity and helps keep the kitchen cooler. Be sure to turn the units off when the cooked food is removed from the range top. Cover pots and pans when steaming food to help prevent burning by retaining moisture in the pan and to reduce cooking time.

GAS RANGE TOP



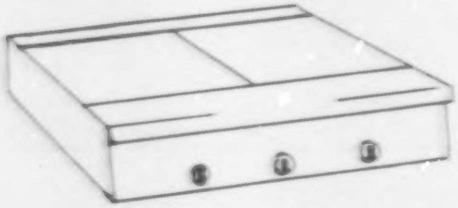
The gas range may have solid, open burners, or ring top cooking surfaces. The gas range should contain a pilot light and an automatic cutoff in case the pilot light fails to come on. Some gas ranges produce instant heat, but the solid top requires a preheating period.

On gas ranges equipped with a pilot light lift the top cover to see if the pilot light is on. If it is necessary to relight the pilot light, depress and hold down the spring type button and apply a match to the pilot opening. After waiting thirty seconds, release the button. The pilot light should stay lit. If the pilot light goes out, wait five minutes and repeat the process. Turn the burner valve on gently. On ranges without pilots, light the match before turning on the burner valve.

Use a low flame for simmering and a high flame for boiling. After the boiling point is reached, turn the flame down to save fuel. Turn off all gas controls when food is removed from the range top.

If open burners are used, pots should cover the entire unit to make the best use of fuel and to cook the food evenly. When solid top burners are used, pots should be arranged to cover as much of the heated surface as possible.

HOT TOP RANGE

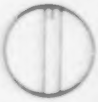


The hot top is used for cooking on top of the stove. It is not practical for heating large containers because it takes too long. Nor is it practical for heating milk, because the milk usually scorches. Any spilled or burned food should be scraped off immediately.

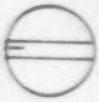
The hot top range heats evenly by a double bar burner. A simmer-set valve is located on the hot top. The surface cooking plate is removable for cleaning.

Each burner has a control knob which is located at the front. There is also a pilot light for each burner.

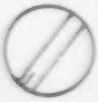
The burner is off when the pointer of the knob is in the 12 o'clock position.



For a high flame, the knob is turned counter-clockwise until it reaches the 9 o'clock position.



For a low flame, the pointer is turned down to about a 7 o'clock position.



Procedures for Cleaning a Range

Clean the range daily for efficient and sanitary operation. Turn the range off and let it cool before cleaning. Clean solid tops and round units with a wire brush or scraper. Wipe tops and units with a solution of hot water and detergent; rinse and dry. You may use cleaning powder to remove rust or spilled food. Remove and scrub drip trays with hot detergent solution; rinse and dry. Clean the sides and base of the range with the same solution. Wipe up immediately any food that has boiled over or spilled. Keep grease cleaned out of cracks or drip trays because spilled grease may become a fire hazard.

Weekly care includes soaking burners in hot detergent solution. Clean the clogged burners on the gas range with a stiff wire brush or an ice pick; then rinse and dry the burners.

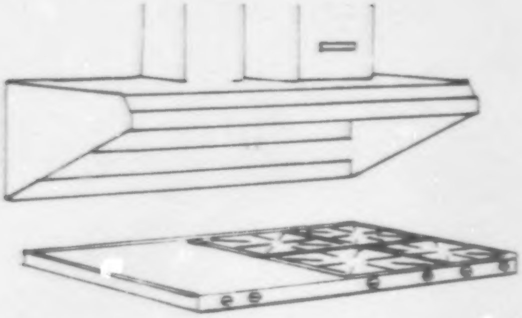
Unpainted parts of the range can be made rustproof by wiping them with a cloth dampened with cooking oil or other rust preventatives. This precaution is unnecessary for stainless steel surfaces.

It is important to let the range cool before cleaning. Do not pour water on top to cool or wash the range. Do not allow water to come in direct contact with wiring or electric switches.

Safety When Using The Range

1. Be sure there is good lighting in the working area for safe operation of the range.
2. Be sure ventilation is adequate.
3. For safety of workers, let range cool before cleaning.
4. Never allow grease to accumulate in cracks of range or on drip trays because of the fire hazard; accumulated grease also causes unpleasant odors and attracts roaches and mice.
5. Avoid unnecessary spillage on the range top; if spillage occurs, clean the range top immediately. (A yellow flame is usually an indication of dirty burners).
6. To prevent burns in removing food from the range, use dry pot holders and make certain that space is available for placing the hot pots removed.
7. To prevent burns when removing lids from pots, use dry pot holders and lift lids away from you so that steam does not scald hands, arms, or face.
8. To prevent burns, do not allow a pot handle to protrude beyond the edge of the range.

EXHAUST HOOD

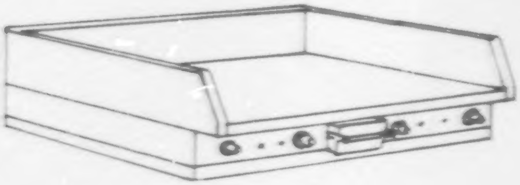


An exhaust hood should be placed above all cooking equipment for ventilation, fire control, and the removal of smoke, cooking vapors, and other odors from cooking areas.

Clean the exhaust hood periodically by using a cloth, and a warm water detergent solution to remove the grease film. Rinse the hood with clean water and dry it with a clean cloth.

Wash the grease filters in the exhaust hood weekly. Remove the filters and wash by hand or in the dish machine. Remove the filter and wipe the surfaces with a damp cloth. Treat aluminum surfaces with general equipment cleaner. To treat surfaces which are not aluminum, apply an alkaline product solution to the surface with a brush or cloth. Filters should soak in the solution 15 to 30 minutes. Rinse filters with warm water and air-dry.

GRILL



A grill may be a separate piece of equipment or it may be part of a range top. The grill may be either gas or electric.

The surface of the grill must be seasoned before use. Seasoning is the build-up of shortening on the grill until a slick surface is formed. A new grill must be seasoned when it arrives in the kitchen, and it must be reseasoned after each thorough cleaning.

To season a grill, bring the heat to 300° F. (148.8° C.). Use a clean, dry cloth to spread a light film of unsalted shortening over the grill. Let the shortening stand for 2 minutes; then wipe the grill clean. Repeat this process until a slick surface is formed. Wipe off excess shortening.

If dull spots occur after several items have been grilled, wipe the surface with a cloth saturated with unsalted shortening to bring back the shine.

To operate the grill, turn the automatic controls on the grill to the desired temperature. The automatic controls cause the temperature to be the same over the entire surface. Several foods can be cooked at different temperatures at the same time, or part of the grill can be turned down (never off) during a slack period.

The leveling adjustments hold the grill surface plate level. When the grill plate is level, there is an even distribution of shortening on the surface plate. The shortening runs to the lower side when the surface plate is not level.

Most grills hold a removable tray to collect grease and food particles. The tray helps to speed up the cleaning process and contributes to the safety and sanitation of food preparation on the grill.

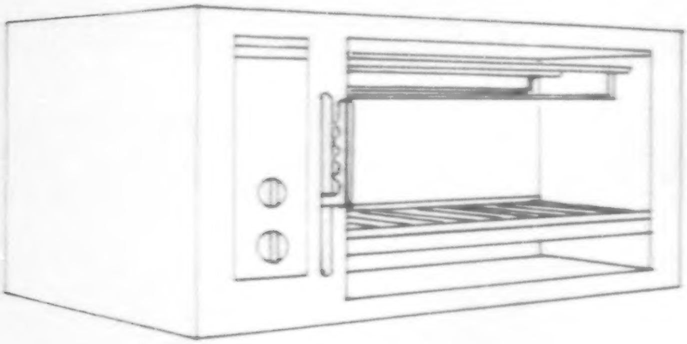
Clean the grill after each use. Allow the grill to cool and scrape the surface with a spatula or a stiff metal scraper. Clean with a pumice stone, wash with a damp cloth and dry with paper towels or a cloth. Season the grill, after cleaning, with unsalted shortening or salad oil.

Remove the grease trays and wash them in a hot-detergent solution. To keep the controls, chrome surfaces, switches and thermostat free from grease, wipe these items with a damp cloth and a mild-detergent solution.

HINTS:

1. Do not throw cold water on a hot grill because of the danger of warping.
2. Never use steel wool on the grill, as it will mar the surface of the grill. Also, some small pieces of the wool may remain on the grill and be picked up later by the food.
3. Avoid using cleaning products that are dangerous to food.
4. Avoid using cleaning products that might scratch the surface of the grill.
5. Do not place pans and pots on the grill; heat them on the range.

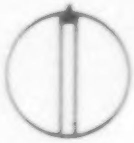
BROILER



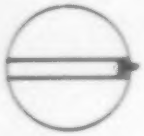
The types of broilers include gas, electric, and charcoal models. Broilers may be backshelf models called salamanders, or they may be separate pieces of equipment.

The broiler is used to cook foods by radiant heat. Meats, poultry, seafood, vegetables, and fruits can be prepared by broiling. The food is usually placed on a grill below the heat source of the broiler. When the charcoal model is used, the food is cooked above the heat source. A grid lever control raises or lowers the food in relation to the heat source of the broiler.

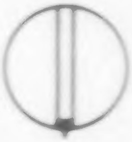
The gas model has the standard pilot light and safety cutoff controls. The electric broiler has two coils inside the top of the broiler oven, one in the front and one in the back. The temperature is adjusted by using knobs, which are pulled out and then locked into position. The positions for high, medium, and low are shown below:



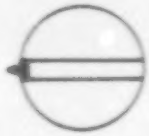
OFF



HIGH



MEDIUM



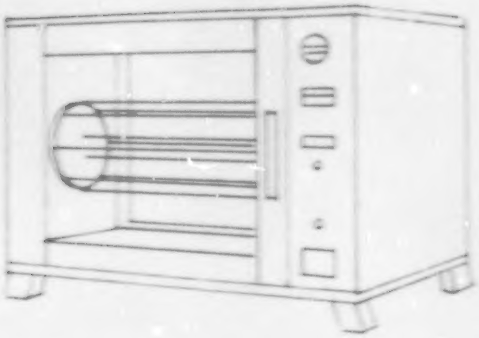
LOW

Preheat the broiler for 15 minutes before use. (When using the gas model, check the pilot light and gas "On" control.) Pull the grid out and place the food to be broiled on the grid. Use the grill lever control to adjust the grid to the correct distance from the heat source. During cooking time, check the broiler trays to prevent grease fires and flare-ups from fatty items.

To prevent excessive sticking of food, wipe the grill with an oiled cloth and wire brush to remove burned food. At the end of the cooking time, turn the heat source off. The broiler can be kept on standby by turning the switch to the low setting.

Let the broiler cool before cleaning. Remove the grid and use a wire brush on both sides of the grid. Apply a thin layer of oil. Scrape grease and burned-on food particles from the unit. Remove and wash grease traps if they are included on the model. Use a hot-detergent solution in cleaning the broiler. Remove the ashes from the tray of charcoal broiler models.

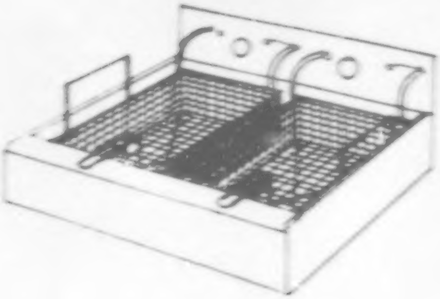
ROTISSERIE BROILER



Restaurants specializing in barbecued food use the rotisserie broiler. It is often placed in a show window or a visible location for advertising.

The rotisserie broiler is heated by refractory burners located behind the rotating spits which hold the meat or poultry. Refractory burners are capable of enduring high temperature. The rotating spits turn and slowly broil the meat on all sides.

DEEP-FAT FRYER



CONVENTIONAL DEEP-FAT FRYER

The deep fat fryer may be either a conventional type or a pressure fryer. The fryers may be either gas or electric. They come in many sizes ranging from small counter units to large doughnut fryers.

The fryer should have an accurate thermostat in which there is little variation from the correct setting. Recovery of heat lost when adding foods must be rapid to prevent the food from absorbing grease. The frying range of 325° - 350° F. (162.7° - 176.6° C.) is used for most foods.

Deep-fat fryers have baskets of many sizes and come with large single units as well as with twin baskets. In many fryers, the kettle has a removable fat container and either a removable electric element or a gas burner. The kettle of the fryer may have an automatic basket lift or a bell to signal the end of the cooking process.

To operate the deep-fat fryer, place the fat in the kettle. Cover the highest coils of the electric fryer to prevent flash fires. Do not overfill the kettle, as the liquid fat expands. Turn the unit on and set the thermostat at the correct frying temperature.

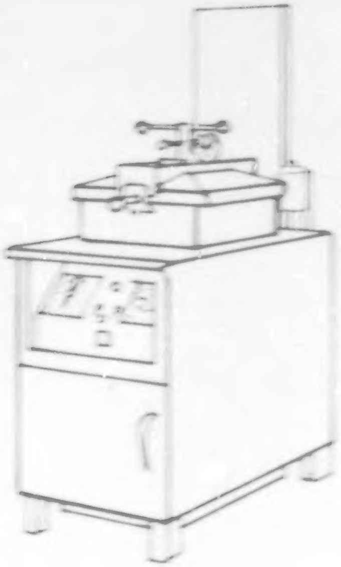
The baskets of the fryer should not be filled more than half full to prevent bubbling over. When the baskets are overloaded, it not only takes longer to cook the food but the food may also become grease soaked and unappetizing. As hot grease and water are explosive, it is important to drain excess moisture from foods that have been soaked in water before frying.

Also remove excess breading from the food to prevent loose crumbs from falling into the fat. Lower the basket into the hot fat. Remove the baskets from the fat when the cooking is completed and drain the food.

Before cleaning the deep-fat fryer, turn the unit off and strain the warm fat through the cone filter. Store the fat. After draining the fat, fill the unit with water and detergent and bring the solution to the boiling point. The kettle should be boiled 15 to 20 minutes. Drain and rinse with clear water. Repeat the rinse process twice. Dry the kettles and baskets before replacing the fat in the kettle.

Raise the coil and clean thoroughly. When it is necessary to scrub the coils and elements, use a soft brush, as wire brushes can wear the heating elements thin. The heating elements on some electric models can be turned on to a low temperature to burn off carbon deposits. Wash the exterior parts of the deep-fat fryer with a detergent solution and dry them with a soft cloth.

PRESSURE TYPE DEEP-FAT FRYER



The pressure fryer has a sealed lid. The lid traps the natural moisture from foods and uses it as steam. The temperature of the fat is held at 240°-325° F. (115.5° - 162.7° C.) for all food. Cooking time does not exceed 7 minutes, and less moisture is removed from the food.

Clean the pressure fryer by closing the drain valve and filling the kettle with a mild solution of detergent, water, and 1/2 cup of deep-fat fryer cleaner. Bring the solution to a boil and scrub the kettle with a stiff brush. Drain and refill the kettle with water. Neutralize the alkali left by the cleaning compound by adding 1/2 cup of white vinegar to the water. Bring the mixture to a boil; drain and rinse the kettle with hot water. Dry the kettle and elements thoroughly with a soft, dry cloth.

Deep Frying

Cooking a food in deep fat is similar to boiling it. The food is completely surrounded by hot, bubbling fat. Since food is surrounded by fat, turning is not necessary. Foods which have been fried in deep fat may be called "French fried" on the menu.

Bread the food, dip it in batter, or wrap it in dough so that the surface of the food is not browned. Over-browning causes food to become dry and tasteless. Some foods, such as fish, float to the top of the grease when done.

Deep-fat frying gives a food service operation a chance to use left-over food that would otherwise be wasted. For example, a leftover salmon loaf can be made into croquettes, deep fried, and served the following day. Other leftover meats, poultry, or fish can be prepared in the same manner.

Foods to be deep-fried can be prepared during a slack time in the kitchen, and frozen for later use. Because deep-fried foods cook rapidly, they can be cooked and served fresh and hot in very little time.

It is of utmost importance to keep the deep-fat fryer and the area around it clean and free from grease. Restaurant fires often start from collected grease near the fryer.

QUESTIONS:

1. When should the "High" setting on electric ranges be used?

2. On gas ranges without pilots, when should you light the match?

3. Draw the positions of the burner knobs for "Off," "High," and "Low" for a gas hot top.

4. List three functions of the exhaust hood.
   a.
   b.
   c.

5. What is meant by "seasoning" the grill?

6. How is a grill seasoned?

7. Draw the positions for the setting of a broiler on "High," "Medium," "Low" and "Off."

8. List the foods that may be prepared by broiling.

9. What control is used to raise or lower the food in relation to the heat source of the broiler?

10. What temperature range is used for deep frying most foods?

11. How full should the baskets of the deep-fat fryer be filled?

12. What happens when the baskets are overloaded?

13. What are foods which have been fried in deep-fat called on menus?

ASSIGNMENT:

I. Identify the types of surface cooking equipment used at your training station. List the procedures followed at your training station, for the use and care of each piece of surface cooking equipment. Check to see if improvement can be made in your duties when using and caring for the surface cooking equipment.

GROUP WORK:

I. Listen to a guest speaker from a utility company explain the use and care of commercial cooking equipment.

II. In small groups, summarize the general use and care of surface cooking equipment. Estimate the consequences of improper use and care of the surface cooking equipment. Present this information to other groups.

UNIT VII-3

LARGE EQUIPMENT FOR COOKING FOOD

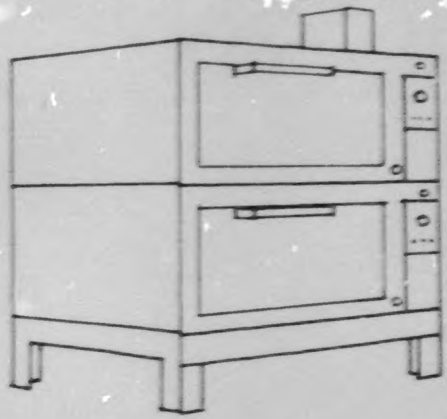
SUBJECT: Ovens

TASK: 13. Select and correctly use proper piece of equipment for cooking food.

OBJECTIVES: When you finish this lesson, you should be able to
a. describe functions of and procedures for use and care of ovens
b. identify types of ovens.

Ovens cook foods with dry heat. They may be operated by either gas or electricity. Ovens are available in convection or conventional types.

STACK OR DECK OVEN



The deck oven is used for roasting, baking, and oven frying, and it may be operated by either gas or electricity. The first step in heating an electric deck oven is to turn the directional heat control switch to "Medium" or "High," as needed. Turn the switch on and set the thermostat at the desired temperature. Allow the oven to preheat before the food is placed in it. Remember that the oven does not preheat any faster when it is set at a higher temperature. When the oven reaches proper temperature, place the food in the oven. Load the decks as evenly as possible. Place the pans over the entire deck area, but keep the pans about 2 inches away from the walls and door of the oven to allow space for the circulation of heat.

Do not rest heavy pans on the door, as this may cause the door to spring and prevent it from closing tightly. Keep the vent control closed completely to prevent heat from escaping. To prevent loss of heat and to produce a better product, avoid excessive opening of the door.

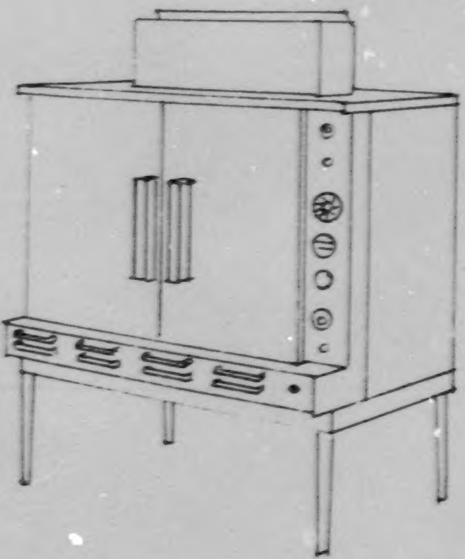
The first step in the operation of a gas deck oven with a pilot light is to turn on the main burner valve. If the oven does not have a pilot, the first step is to turn the thermostat as high as possible. Light the match before turning on the main burner valve. Do not close the oven door until the oven is lighted.

After lighting the burner, set the thermostat at the desired temperature. Just as with the electric oven, setting the thermostat at a high temperature does not decrease the length of time necessary for preheating. When the oven reaches the proper oven temperature, place the food in the oven.

To increase the temperature on either the gas or the electric oven, reset the thermostat dial and wait until the "oven ready" light goes out before loading the oven. To lower the oven temperature, turn the thermostat below the actual temperature required and open the oven door until the "oven ready" light goes on. Close the door, reset the thermostat, and wait for the "oven ready" light to go out again before loading the oven.

Clean the deck ovens daily by scraping them with an oven scraper to remove deposits. Clean the interior oven walls with a damp cloth or wire brush. At intervals, clean crumbs from the return air passage. You may use a solution of 1/2 household ammonia and 1/2 water to clean the exterior surfaces.

CONVECTION OVEN



The convection oven is used in many hospitals, restaurants, nursing homes, commercial and industrial cafeterias, and drive-ins. Electric or gas convection ovens may be in single units or double stacks.

Convection ovens contain a fan to increase air circulation. The fan circulates heated air across the food for more rapid cooking. Use of the convection oven shortens cooking time for most foods and helps to reduce meat shrinkage.

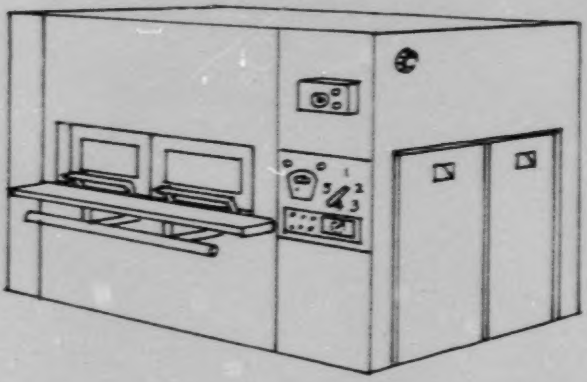
To operate the convection oven set the temperature dial to the desired setting. Turn the power switch on to pre-heat the oven. When the temperature signal light goes off, the oven is pre-heated. Open the doors, load the oven quickly, and close the doors. The oven and the blower operate only when the doors are closed. Set the automatic timer for the proper length of cooking time. The automatic timer will ring when the cooking time is completed.

To clean the convection oven, wipe the inside of the oven and the racks. Use a wire brush or spatula to loosen food particles and spillage, and sweep the oven clean. For hardened food spillage, sprinkle salt on the hardened food, turn the thermostat to 500° F. (260° C.), close the oven door, allow the spillage to carbonize completely, and scrape the surface of the oven with a spatula.

Wipe the stainless-steel front of the oven with a damp cloth and polish it with a soft dry cloth. Wash the exterior surfaces of the oven daily with a warm water-mild detergent solution. Rinse the surfaces with clear water and dry them with a soft cloth. Use a cloth gently on the polished areas, as hard rubbing removes polish. Wash the plastic control knobs with the warm water-mild detergent solution; dry and polish the knobs with a soft cloth.

The blower wheel needs to be cleaned occasionally. To clean the blower wheel, pull it forward and lift it up and out to remove the racks. Lift up to remove the right and the left rack supports. Take out the thumb screws on the rear inner wall of the oven and remove the blower baffle. Use a wire brush to scrape the wheel. Wipe the wheel with a moist cloth to remove loose particles. Reverse the disassembly procedure to replace the hardware.

ROTARY OVEN

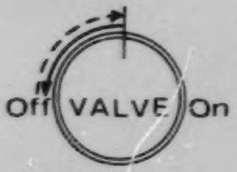


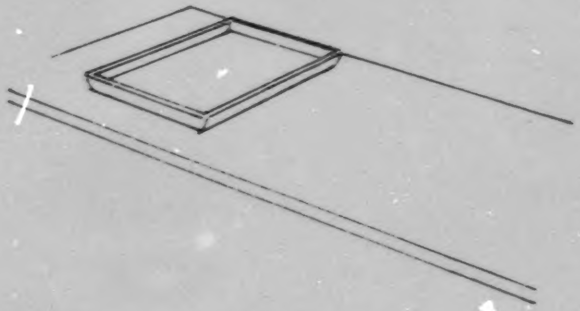
Rotary ovens are used in large operations and are selected particularly for baking pies and bread. They may be gas, electric, or oil-fired. The food to be cooked is placed on movable trays in the oven. The trays revolve around the heat source on the same principle as a "merry-go-round" revolves upon a vertical axis.

To operate the rotary oven turn, on the reel motor, set bank, and control bank. The shelves should rotate during the pre-heat time to keep them from warping. Turn on the exhaust fan to eliminate heat in the kitchen. Turn the control bank switch to the proper temperature. (The control bank operates the circuit for cutting the heat in or out.) Turn off the set bank switch when the oven reaches the appropriate temperature. (The set bank needs to be left on during the operation of some models.) Failure to turn off the set bank causes the product to burn. Re-set the set bank if the temperature has to be raised.

Pull out the exhaust and steam knobs if the temperature needs to be reduced. If steam has not been used, pull out only the exhaust knob. This allows the steam to escape and reduces the temperature.

Some rotary ovens use steam. When preparing to use steam, leave the bottom valve (condensate valve) open at all times. The condensate valve drains the condensation from the line and keeps the moisture from running into the oven. Do not turn steam on during the preheat period. When the oven has preheated, turn on the steam by turning the steam inlet valve to half open and then back to barely open.



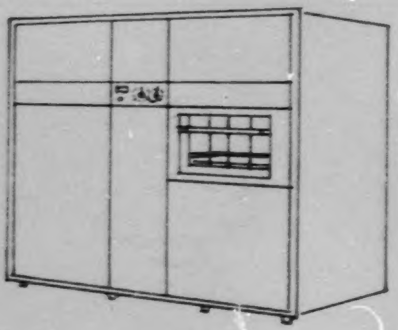


Keep the weight evenly distributed on the shelves when loading a rotary oven. Place two or three pans on a shelf, rotate the shelf and proceed to follow the same procedure with each shelf. Return to the first shelf and complete the loading procedure by placing additional pans on the shelves.

Rotating the shelves while loading the oven also eliminates too much weight in one area. Even distribution of the pans keeps the shelves in balance. The pans should not extend over the front edge of the shelf but should be centered on the shelf.

To clean the rotary oven, shut off the main circuit breaker. Do not turn the breaker on until the oven is clean. Wash the shelves with a water-detergent solution. Clean the exterior of the oven with a water-detergent solution and dry the exterior with a soft cloth. Turn on the breaker. Heat the oven to eliminate moisture and to prevent rusting.

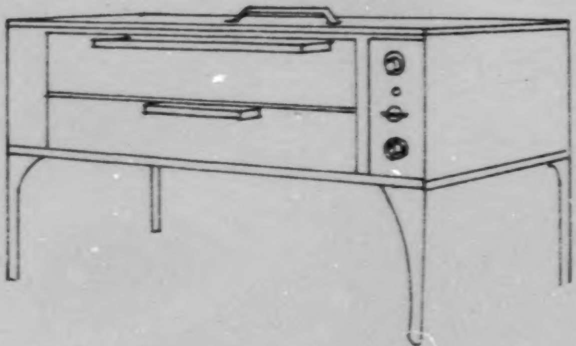
REEL OVEN



Reel ovens are used in both large and small restaurants and institutions. Six-pan units which can hold 350 pounds of meat or 48 loaves of bread are often used in small food service operations.

The reel or revolving oven is compact and space saving. It works on the principal of a "ferris wheel." The flat trays are held between two revolving arms and are stabilized to keep level and swag proof. The reel oven is cleaned by following the procedure for cleaning the rotary oven.

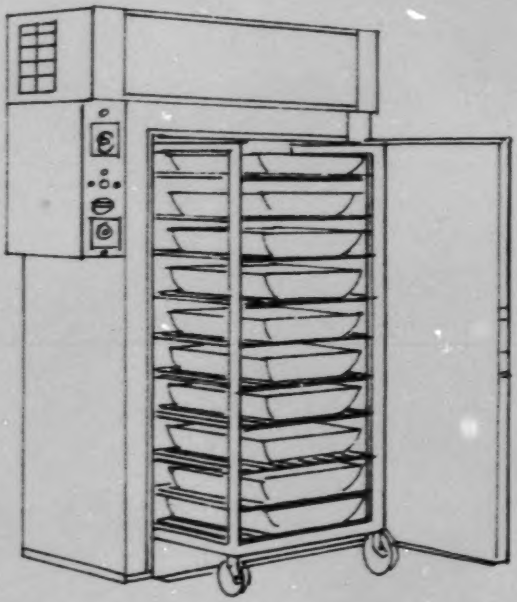
PIZZA OVEN



The pizza oven reaches a hotter temperature than the conventional oven. It is equipped with a special high-temperature thermostat control up to 700° F. (371.1° C.). The pizza oven has indicator lights, interior lights, and switch.

Clean the pizza oven regularly. After the oven has cooled, scrape the interior with a wire brush. Wash the exterior surfaces with a solution of detergent and water. Polish the stainless steel surfaces with a nonabrasive, stainless steel cleaner. Scrap the racks with a wire brush and wash them with a water-detergent solution.

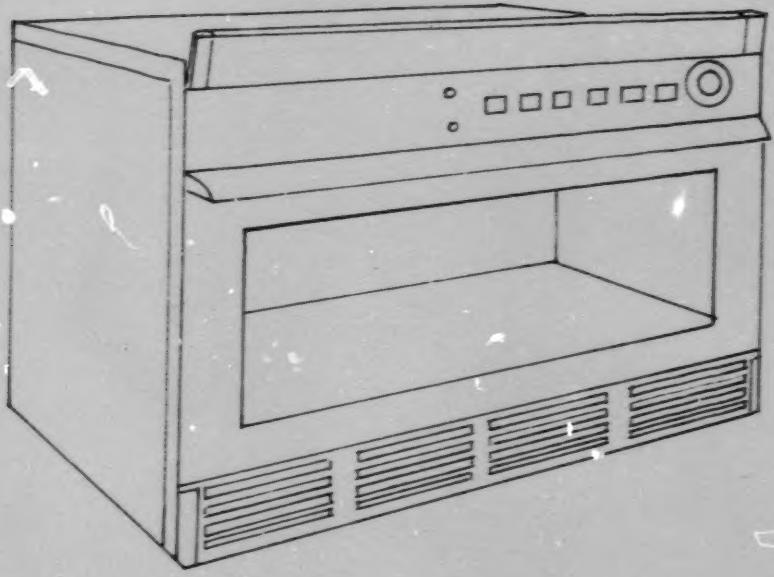
RECONSTITUTION OVEN



The reconstitution oven is used for rapid heating, especially for convenience foods. The oven has a combination heat and refrigeration cycle. Frozen foods may be either stored in the unit until reconstituting time or moved to the heating unit from the frozen storage area.

The reconstitution oven is a quartz-type oven and operates at 650° F. to 750° F. (343.3° C. to 398.8° C.). Quartz units inject radiant heat into the frozen food. The convected heat is held by the refrigerated cycles, causing rapid defrosting and reconstitution of the frozen food. Due to the speed of the defrosting process, little moisture and flavor are lost. It is not necessary to thaw the frozen product before heating it in the reconsituting oven.

MICROWAVE OVEN



REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois; Chas. A. Bennett Co., Inc., 1974. pp. 106-109.

Microwave ovens or electronic ovens cook in minutes the same food that requires hours in a regular oven. Microwave ovens defrost frozen foods and reheat precooked foods in seconds. They are better suited to the fast production of individual servings than they are to heating the quantities of food usually required at one time for dining room service.

The microwaves, or energy waves, are bounced off the metal walls of the oven and through the food containers, where they are absorbed by the food and converted into heat. Employees should be cautioned to avoid possible radiation danger in the use of microwave ovens. Users should stay at least an arm's length away from the front of the oven while it is on and refrain from looking in the viewpoint to watch food cooking. User should switch the oven off before opening the door.

Food containers which may be used in the microwave oven are glass, paper, and ceramics. Aluminum foil may be used in some of the microwave ovens. Metal containers should not be used in the microwave oven, as the metal may cause tube damage to the unit. The use of plastic containers in the microwave oven is questionable. Some plastic containers may be used with good results; other plastic containers affect the taste of the food and give off a bad odor as the plastic heats.

To operate the microwave oven, turn the power switch to the "ON" position to heat the unit. Place the food item in the compartment and close the door. Set the timer for the desired time and press the control button. Most microwave ovens shut off automatically when the "time set" is completed.

To clean the microwave oven, wipe the metal pieces with a clean cloth and a water-detergent solution. Dry with a soft cloth.

QUESTIONS:

1. Briefly list the three steps in heating an electric deck oven.
   a.
   b.
   c.

2. Why should a person avoid excessive opening of an oven door during baking?

3. Jane forgot to turn on the oven at the time the head cook told her. When she remembered to do it, she asked Betty if it would preheat faster if she set the thermostat on high. What should Betty have told her?

4. What is the principal use of rotary ovens?

5. Which oven has a combination heat and refrigeration cycle?

6. The pizza oven has a thermostat control up to ______________ degrees.

7. Microwave ovens are best used for ______________ servings.

8. List three containers which may be used in the microwave oven.
   a.
   b.
   c.

ASSIGNMENT:

I. What type of ovens are used at your training station? List the procedure followed by your training station, for the use and care of each oven. Check to see if any improvement can be made in your duties when using and caring for each oven.

GROUP WORK:

I. Compare the procedures for the use and care of the ovens at your training station with the procedures used by other food service employees. Note the various functions of ovens in food service.

II. Visit a restaurant supply store to learn about the various types of ovens used in the food service industry. Identify the type used at your training station.

UNIT VII-4

LARGE EQUIPMENT FOR COOKING FOOD

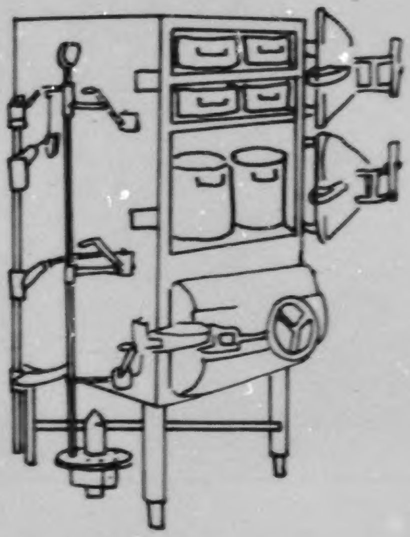
SUBJECT: Steaming Equipment

TASK: 13. Select and correctly use proper piece of equipment for cooking food.

OBJECTIVES: When you finish this lesson, you should be able to
a. describe procedures for operation and care of steaming equipment
b. list safety precautions related to use of steaming equipment.

In steam-fired equipment the steam comes in direct contact with the food or else the steam surrounds the food compartment and does not come in direct contact with the food. The water in steam equipment may be heated by gas or electricity. Cooking with steam is easy, economical, fast, and safe.

COMPARTMENT STEAMER



The compartment steamer allows steam to be held in direct contact with the food. The compartment steamer is used for steaming fruits, vegetables, meat, fish, and poultry. Tall, narrow, perforated baskets should be used when preparing cabbage, cauliflower, root, and tuberous vegetables. Flat, narrow, or wide perforated baskets are used for greens, root, and tuberous vegetables. Tall, narrow solid baskets are used for large cuts of meat, fowl, and root vegetables.

To operate the compartment steamer, pre-heat the unit. Turn on the boiler and let the pressure rise to 5 or 15 pounds. Place a pan of food in the compartment. (In order to allow for expansion of food, do not fill the pan to the top.) Before turning on the steamer, close and lock the door. Close the compartment door; hook and turn the door seal until it is tight. Turn on the steam control by pulling the steam valve forward. This process puts steam in the jacket to start the cooking. As the steam starts, tighten the door seal if there is a steam leakage at the edges of the door. A hissing sound will be heard as the air is discharged from the compartment. When the hissing sound stops and the desired pressure has been reached, begin timing the food to be cooked. When the cooking time is completed, push the steam control to let the pressure drop. Allow the pressure to reach zero and open the door part way to let the vapor clear. Open the door and remove the food gently to prevent hot foods from splashing.

The length of the cooking time depends on the type of steamer, the kind and the amount of food cooked, and the containers used. Use a timer to prevent overcooking.

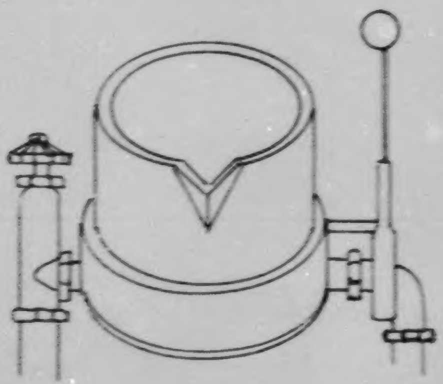
Clean the compartment steamer daily. Wash the interior of the compartment with a detergent and water solution; rinse and wipe the compartment dry. Remove th water by means of the drain in the bottom of each compartment. Scrub both sides of the grates with a brush; rinse and dry the grates. Clean the outside of the unit with the same solution and a sponge or cloth. Check the bottom drain to e make certain it is clean and free of food. Clean the pressure screws with the detergent-water solution. Check the gasket daily and replace the gasket when it shows evidence of hardening or damage. Scrub the door gasket thoroughly. (Fats, food acids, and alkalies deteriorate the gasket and off-flavors may develop.) To prevent the gaskets from sticking to the compartment, leave the doors of the compartment slightly open when the steamer is not in use.

Safety precautions when using the compartment steamer include:*

1. Guard against possible burns when opening the door.
2. If steam pressure rises above the safe level, shut off the steam, and report the problem to your training supervisor.
3. To prevent burns in removing food from the steamer, use dry pot holders, and make certain that space is available for placing the pans as they are removed.
4. Clean up spilled food immediately so that the vent does not become clogged.
5. See that the proper water level is maintained in self-contained steamers to prevent the boiler from burning out. Check the water level at intervals during the operation. Never use a steamer without water.
6. If steam leaks around door after tightening, report the leakage to your training supervisor.

STEAM JACKETED KETTLE

The steam jacketed kettle is fast, safe, economical, and easy to use. Steam enters the jacket and comes into contact with the cold inner wall. The steam *condenses* (the vapor changes into liquid), conducting its heat through the wall and into the product being cooked. The steam jacketed kettle is used to braise, boil, or simmer. The kettles range in size from the 10 quart table model to the 200 gallon floor or wall model.



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*U.S. Department of Agriculture. *Training Course Outline on Use and Care of Equipment*. Washington, D.C.: U.S. Government Printing Office, 1960. pp. 86-90.

To operate the steam jacketed kettle, turn the boiler on and wait for the pressure to reach the proper level. Open the water valve. For electric and gas self-contained kettles, keep the water at the half-way level in the gauge glass. For kettles requiring the addition of water, fill the jacket according to the manufacturer's instructions. Check the safety valve. For the electric or direct steam kettle, turn on the steam valve or electric switch. For the gas kettle equipped with a pilot, turn on the main burner valve. (If the pilot goes out, check with your supervisor.) Adjust the heat or steam to the proper temperature and pressure. Add the food to be cooked.

When cooking is completed, turn off the steam valve and remove the food from the kettle. Fill the empty kettle with warm water above cooking level until it is time to clean the kettle. The warm water loosens food from the inside walls of the kettle.

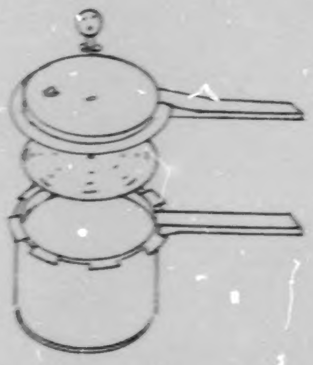
To clean the steam jacketed kettle, open the drain valve and drain the water from the kettle. The food particles are caught in the screen that covers the draining device. Scrub the inside of the kettle with a brush, warm water, and detergent. Scrub the underside of the lid and hinges. Use the same water and detergent solution to clean the legs, pipes, and outside of the kettle. Drain the soapy water. Fill the kettle 1/3 full with warm water and rinse the inside and the outside of the kettle. Drain the rinse water from kettle. Wipe the kettle dry with a soft cloth and leave the lid open.

Safety precautions when using the steam jacketed kettle include:*

1. Guard against possible steam burns when raising the kettle lid; lift the lid away from you so that steam does not scald hands, arms, or face.
2. See that the proper water level is maintained in the water jacket.
3. If the water jacket has gone dry, do not add water to the jacket without first allowing the kettle to cool.
4. Be certain that the safety valve is in good working order.
5. If the steam pressure rises above the safety level, turn the kettle off and call a reliable service organization.
6. To prevent burns, use long-handled paddles for stirring and long-handled dippers for removing food.

PRESSURE SAUCE PAN

The pressure sauce pan is generally used for vegetables. Poultry, meats, seafoods, cereals, eggs, puddings, and fruits are also prepared in the pressure sauce pan.



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*U.S. Department of Agriculture. Training Course Outline on Use and Care of Equipment. Washington, D.C.: U.S. Government Printing Office, 1960. pp. 86-90.

The pressure sauce pan operates by locking steam in the pan. The steam raises the temperature and permits food to cook rapidly.

The heat is transferred from the steam to the food. When steam reaches the cold food, it condenses and gives off heat. Steam condensation continues until the heated food is brought to the same temperature as the steam (212° F. or 100° C.). The pressure sauce pan has a lid which locks in position, a vent tube which allows steam to escape, and a safety valve which automatically releases steam if the pressure becomes excessive.

Clean the pressure sauce pan after every use. Wash and scrub the pan with a warm water and detergent solution. Rinse with hot water and air-dry. It may be necessary to soak the pressure sauce pan before washing it if there is a heavy coating of food or grease.

QUESTIONS:

1. What should you do before turning on a compartment steamer?
2. This is the procedure Betty followed when she used the compartment steamer:
   a. Pushed valve to release steam.
   b. Opened door immediately.
   c. Placed food in steamer.
   d. Closed door.
   e. Started timing.

   Did she use the correct procedure?

   If not, what should she have done?
3. How should a person guard against possible steam burns when raising the lid of the steam jacketed kettle?
4. What is the pressure sauce pan generally used for?

ASSIGNMENT:

I. Examine the manufacturer's instruction booklets for information on the use and care of steaming equipment. What safety procedures are stressed in the instructions? What safety procedures are stressed at your training station? Compare the safety procedures stressed.

GROUP WORK:

I. With other food service employees, discuss the accidents involving steam equipment that have occured in the training stations or in other food service establishments. Discuss how each accident might have been prevented.

II. Observe a demonstration on the use and care of steaming equipment. Note the safety precautions followed.

UNIT VIII-1

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Quality Food Preparation

TASK: 14. Read recipes, know terminology, and follow directions.

OBJECTIVES: When you finish this lesson, you should be able to
a. describe general procedures for food preparation
b. summarize characteristics of standard recipes.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 97-100.

GENERAL PROCEDURES IN FOOD PREPARATION

Quality food must be produced and served in food service establishments in a given amount of time and at a reasonable cost in order to satisfy both the customer and the management. Labor costs for food preparation make it necessary for the personnel, equipment, and supplies to be organized efficiently. Speed and accuracy are improved by using time and skills wisely. The following procedures will contribute to the development of speed and accuracy on the part of the food service employee.

1. Read the recipe carefully before beginning. To obtain the best results, follow the directions exactly as given.
2. Check to see that all the necessary ingredients are available.
3. Make substitutions in ingredients only when necessary to reduce cost, to save time, or to make use of surplus commodities on hand.
4. Check to see that the necessary equipment or a suitable substitute is available before beginning.
5. Be able to apply terms used in the recipe.
6. Estimate the time required for preparation of the product and plan so that the product will be finished at the proper time.

STANDARD RECIPES

The customer expects the food to be prepared so that it is consistent in appearance and taste each time he orders that particular food. Success in the area of food preparation involves using recipes as guides for preparing food of high quality. In order to achieve quality products, time after time, a cook should standardize recipes and methods of food preparation.

Have you ever thought about recipes being something like formulas? A chemist carefully follows a formula to make a compound, just as a cook must carefully follow a recipe to make a food product. A standard or dependable recipe is, therefore, a must if the result is always to be of the same quality. Standard recipes include the following information:

1. Amount of ingredients
2. Utensils to be used
3. Clear directions about how to combine ingredients
4. Cooking temperatures and length of cooking time
5. Number of servings
6. Size of servings
7. Number of portions per pan, quart, or gallon
8. Terms which are familiar to most cooks

QUESTIONS:

1. Mary has been assigned to prepare Plain Muffins. It is now 10:30 a.m. and the muffins are to be served at 12:00. Using the information below, compare Mary's preparation procedure with the general procedures for food preparation given on page 187.

PLAIN MUFFINS

5 1/4 qt. all-purpose flour
2 1/4 c. sugar
1 cup less 2 T. baking powder
1/4 cup salt

10 large eggs
2 c. nonfat dry milk
2 qt., 2 1/3 c. water
2 1/4 c. shortening

Blend dry ingredients 5 minutes in mixer on low speed. Cut in fat. Beat eggs and combine with water. Add to dry ingredients. Stir only until dry ingredients are moist and mixture has a rough appearance. Using # 16 scoop (1/4 cup), portion into greased muffin pans. Bake 20 minutes at 400° F. or 204.4° C. (hot oven). Makes 100 muffins.

Mary proceeded in the following manner:

(1) She measured the shortening and then checked to see that she had all the necessary ingredients.
(2) She blended the dry ingredients for 5 minutes and cut in the fat.
(3) She beat the eggs and added the water.
(4) She next beat the dry ingredients into the liquid mixture.
(5) Then she used a # 16 scoop to portion the batter into greased muffin tins.
(6) Lastly she turned the oven to 400° F. (204.4° C.). It was then 11:50 A.M.

Which four procedures in food preparation did Mary fail to observe?

2. Tom was assigned the task of preparing Blueberry Muffins. He was instructed to use the preceding recipe for Plain Muffins; however, 2 c. of drained, canned blueberries were to be added to the muffin mix. Tom prepared the muffins as follows.

(1) He blended the dry ingredients.
(2) He cut the shortening into the dry ingredients.
(3) He set the oven for 400° F. (204.4° C.)
(4) He greased the muffin pans.
(5) When he was ready to mix the dry ingredients with the liquid ingredients, he discovered that he did not have any eggs.

What four procedures in food preparation did he fail to observe?

3. The head cook asked Ethel to experiment with three recipes she had found for tuna casserole. Ethel carefully measured and mixed the ingredients in the first recipe and put the casserole into the oven. Ethel had several questions to ask about the recipe as she prepared the casserole: (1) What cooking temperatures should be used? (2) How many servings would it provide? (3) What were the meanings of several terms used in the recipe? When the casserole was taken from the oven, it was over-cooked and it provided fewer servings than she expected.

a. What information was missing from the recipe that should be included in a standardized recipe for quantity food preparation?

b. Why is it especially important to use standardized recipes in a food service establishment?

4. In what order are the ingredients and steps in a standard recipe written?

ASSIGNMENT:

I. Evaluate a quantity recipe. Keep in mind the information that a standard recipe should include.

GROUP WORK:

I. Work in small groups to study a specific quantity recipe. Describe how to use it correctly. Consider the procedure that will contribute to the speed and accuracy of food preparation.

UNIT VIII-2

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Terminology Used in Food Preparation

TASK: 14. Read recipes, know terminology, and follow directions.

OBJECTIVES: When you finish this lesson you should be able to

a. identify abbreviations used in recipes
b. make standard substitutions in recipes
c. use standard equivalents in preparing quantity food
d. select the most efficient measurement for the ingredients in a recipe
e. identify the terminology used in recipes.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 101, 117-119.

COMMON ABBREVIATIONS FOR FOOD PREPARATION

Abbreviations are used to save time and space in writing recipes. Ability to use quantity recipes is dependent on knowledge of commonly used abbreviations. Abbreviations commonly used in food preparation are given below:

approximately = approx.
average = av. or avg.
bunch = bch.
bushel = bu.
calorie = Cal.
centigram = cg.
centimeter = cm.
cup = c.
degrees Centigrade = °C.
degrees Fahrenheit = °F.
dozen = doz.
few grain = f.g.
fluid = fl.
gallon = gal.
gram = gm.
hour = [illegible]
joule = J
kilometer = km.
large = lg. or lge.

medium = med.
meter = m.
milligram = mg.
milliliter = ml.
minute = min.
monosodium glutamate = M.S.G.
ounce = oz.
peck = pk.
pint = pt.
pound = lb.
quart = qt.
second = sec.
small = S., sm., or sml.
speck = spk.
square = sq.
tablespoon = T., tb., or tbsp.
teaspoon = t., ts., or tsp.
temperature = temp.
weight = wt.

Additional abbreviations which may be found in quantity food recipes are the following:

as purchased-(A.P.)--This means that the weight or measure should be taken without any preparation of the food. Examples: flour unsifted, lettuce whole, eggs unshelled, etc.

edible portion-(E.P.)--This means that only the part of the food normally eaten or used in cooking is being considered. Peanuts after being shelled, eggs out of shell, etc. Recipes generally specify any preparation an ingredient needs before it is used, i.e., sift, chop, mince, etc.

SUBSTITUTIONS

The food service employee should become familiar with the substitutions commonly used in recipes. Substitutions may be made to cut down on cost, to save time, to increase the food value, or to make use of surplus commodities.

Standard substitutions are:

1 sq. chocolate = 3 T. cocoa and 1 T. fat
1 c. cake or pastry flour = 7/8 c. all-purpose flour
1 T. cornstarch = 2 T. flour (for thickening)
1 t. baking powder = 1/4 t. soda and 1/2 t. cream of tarter
1 c. milk = 1/2 c. evaporated milk and 1/2 c. water
= 1 c. reconstituted nonfat dry milk plus 2 t. fat
1 cup sour milk or buttermilk = 1 c. fresh milk plus 1 T. vinegar or lemon juice (let stand 5 minutes)
1 c. sour milk and 1 t. soda in flour mixture = 1 c. fresh milk plus 3 t. baking powder
1 T. corn syrup (in candy) = 7/8 t. cream of tarter
1 c. butter = 1 c. margarine or 7/8 c. fat plus 1/2 t. salt
1 whole egg = 2 egg yolks or 2 T. dried whole egg plus 2 1/2 T. water
1 c. honey = 1 to 1 1/4 c. sugar plus 1/4 c. liquid

EQUIVALENTS

The successful use of a recipe depends largely upon accuracy in measuring the ingredients. To be able to measure accurately, one must become familiar with the commonly used equivalents listed below:

EQUIVALENTS OF COMMON MEASURES

3 t. = 1 T.
16 T. = 1 c.
1 T. = 1/2 fl. oz.
1 c. = 8 fl. oz.
2 c. = 1 pt.
1 pt. = 16 fl. oz.
2 pt. = 1 qt.
1 qt. = 32 fl. oz.

4 qt. = 1 gal.
8 qt. = 1 pk.
4 pk. = 1 bu.
16 oz. = 1 lb.
spk. = less than 1/8 t.
f.g. = less than 1/8 t.
pinch = less than 1/8 t.

TERMS USED IN FOOD PREPARATION

To be successful in quantity food preparation, the food service employee must be able to identify terminology used in standard recipes. He must also master certain food preparation techniques. A list of terms are defined below to provide a basis for interpreting directions used in recipes for meats, salads, vegetables, fruits, desserts, and pastries. The terms have been grouped into areas in which they are used most frequently. However, many of the terms listed are used in other types of cookery as well.

No attempt has been made to make this list complete. Dishes native to other countries are very popular in the United States. For the gourmet chef, French is an absolute must. Some of the terms given here are of a French origin. Students working in food service establishments which feature dishes native to other countries, should also become familiar with these terms.

TERMS USED IN MEAT COOKERY

Bake	to cook by dry heat in an oven
Barbecue	to cook by direct heat source; food may or may not be basted with a sauce or drippings during cooking
Baste	to spoon liquid over food as it cooks; the liquid may be drippings from the food
Bouillon	a clear broth from meat juices
Bouillon Cubes	a commercially prepared concentrated broth packaged in cubes
Braise	to cook slowly in a covered utensil in a small amount of liquid or in steam; meat may or may not be browned in small amount of fat before braising
Bread	to roll in bread crumbs, such as breaded cutlets
Broil	to cook by exposure to direct heat on a grill or over live coals, such as broiled chicken or steaks
Croquette	usually a meat plus other ingredients shaped into cones, breaded, and fried or baked
Crumb	to coat or top with crumbs, such as a casserole dish; technique may be used with other foods
Cube	to cut into squares about 1/2 inch in size
Dip in Batter	to dip food in smooth mixture of flour and liquid prior to frying

Dredge	to coat with flour or other fine substance
Dust with flour	to sprinkle with flour as "flour the meat"; technique may also be used with vegetables
Entree	the name given to the food dish served as the main course
Fillet (Filet)	to separate a raw, choice piece of meat or fish from the bones; also the name of the piece after being cut. Example: filet mignon.
Flake	to break into small bits by using a fork, taking care not to mash the pieces
Fricassée	to cook by braising; usually applied to fowl, rabbit, or veal cut into pieces
Grill	to cook by direct heat
Grind	to reduce to particles by cutting or crushing
Lard	any form of pork fat. Examples: salt pork, bacon or pig's fat
Marinate	to let food stand in a marinade, usually an oil-acid mixture like French dressing to tenderize or add flavor; technique may be used with vegetables or other foods
Roast	to cook in an uncovered pan in an oven
Roux	a mixture of fat (such as meat drippings) and browned flour used to thicken and add flavor to sauces, soups, and gravies
Score	to make thin parallel cuts in one or more directions on food surface
Sear	to brown surface of meat by heating at high temperature for short time; adds color and flavor to meats
Season	to improve flavor by adding salt, pepper, or spices
Smother	to cover with sauce or vegetables. Example: smothered calf's liver is covered with onions.
Stuff	to pack a mixture into a cavity, as with turkey or bell peppers
Truss	to secure the wings and legs of a bird with pins or twine

TERMS USED IN PREPARATION OF SALADS, VEGETABLES, AND FRUITS

Au gratin	dishes prepared with a white sauce, topped with bread crumbs and cheese, then baked for a short period
Blanch	to dip into boiling water, making the skins of fruit and nutmeats easy to remove or stopping action of enzymes
Candy	to cook in a heavy syrup until plump and transparent or crystalized; also to cook a second time in sugar or syrup
Chill	to place in refrigerator until cooled to a temperature between 40°-45° F. (4.4°-7.2° C.)
Chop	to cut into pieces less than 1/2 inch in diameter with a sharp knife or other tool
Congeal	to cause foods to become firm by lowering the temperature enough to thicken the gelatin in the food
Cool	to lower the temperature
Core	to remove the core or center of fruit (apples, etc.)
Cut	to divide food into small irregularly shaped pieces
Dice	to cut into small cubes
Garnish	to add a decoration (usually edible) to a food to make it more attractive
Grate	to form flakes by rubbing food with pressure against a grater
Hull	to remove the stem and cap from berries; also, to remove husks and silks from corn
Julienne	to cut foods, such as potatoes, cheese, meats, and carrots, into pieces the size and shape of match sticks
Mash	to pulverize by pressing and working with a wire or flat-headed device
Mince	to cut or chop into very small pieces
Pare	to cut off the outside covering with a knife or other utensil
Peel	to strip off the outside covering by hand
Pit	to remove the stone (pit) or seeds from fruit
Purée	to force cooked foods through a strainer or to run them through a blender to make a thick, smooth pulp

Reconstitute	to restore concentrated foods to their normal state usually by adding water. Examples: dried milk, frozen juice
Scallop	thinly sliced layers of food sprinkled with flour, salt pepper, bits of fat, or cheese; food is layered until baking dish has desired amount; liquid (vegetable juice or milk) is added; then food is baked in a slow oven
Thaw	to bring to a temperature above freezing
Unmold	to loosen and remove from a container

SURFACE COOKING TERMS

Boil	to cook in water or other liquid until bubbles rinse continuously and break on the surface
Caramelize	to heat sugar, or foods containing sugar, until brown
Coat-the-spoon	to cover a metal spoon with a film of thickened sauce
Coddle	to cook in water below the boiling point, as with coddled eggs
Cool	to lower the temperature
Crystallize	to cause to form crystals (primarily used in making candy and frozen mixtures)
Deep-fat fry	to cook in deep fat
Dilute	to lessen the strength, thickness, or flavor of a mixture, usually by adding water
Dip	to plunge into a liquid or dry ingredient until covered and then to remove quickly
Dissolve	to combine or mix a solid ingredient with a liquid until a solution is formed
Fry	to cook in fat
Glacé	to coat with a thin sugar syrup cooked to the cracking stage
Grill	to fry, sauté, or toast on a solid heated surface or griddle; a form of pan-broiling
Melt	to liquify by heat
Pan (Panning)	to cook a vegetable in a tightly covered skillet in a small amount of fat; no water is added. (Term also has a different meaning in commercial baking)

Pan-broil	to cook uncovered on a hot ungreased surface (usually a frying pan), pouring off fat and liquids as they accumulate
Pan-fry	to cook in a small amount of fat
Parboil	to simmer until partially cooked
Poach	to cook in a hot liquid, being careful to retain shape, as with poached eggs
Sauté	to brown quickly in a small amount of fat, turning frequently
Scald	to heat to a temperature just below the boiling point
Simmer	to cook in a liquid at a temperature of about 185° F. (85° C.); bubbles form slowly and break below the surface
Steam	to cook in steam with or without pressure
Thicken	to cause a food to become firmer by the addition of eggs, flour, or other products and by cooking them for an additional period of time. Gelatin may be added to a hot food to make the food become firm when chilled.

BAKING AND PASTRY TERMS

Beat	to mix until smooth, using an up-and-over motion
Blend	to thoroughly mix two or more ingredients
Brush	to spread melted fat with a pastry brush
Cream	to stir or beat one or more foods until smooth and creamy; usually applies to fat and sugar
Cut-in	to chop fat into small particles in dry ingredients by using two knives or a pastry blender
Dot	to cover with small particles, as to dot with butter
Flute	to make an edge with a scalloped effect, as on pie crust
Fold	to combine ingredients by cutting vertically through a mixture and turning it over by sliding the spoon or rubber spatula across the bottom of the bowl with each turn
Knead	to press, fold, and stretch a dough, such as a yeast bread or biscuits
Leaven	to make light using an agent, such as yeast or baking powder

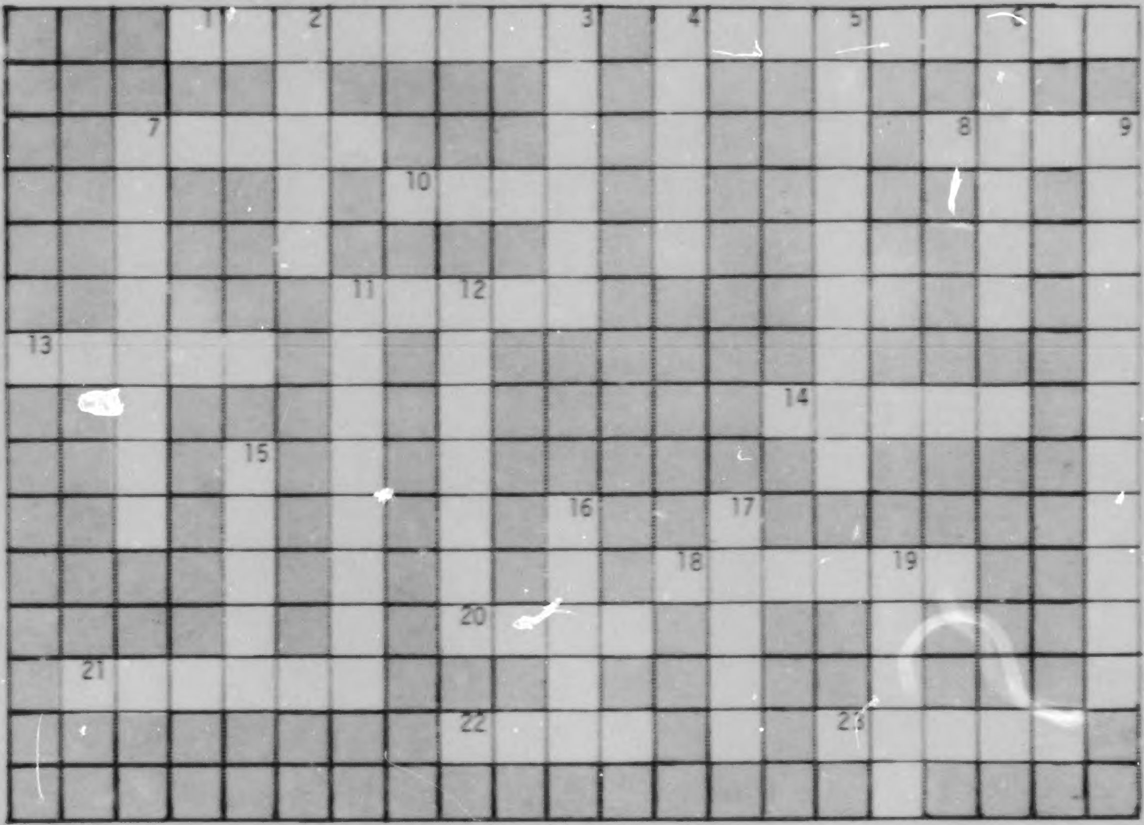
Level Off	to move the straight edge of a knife or spatula across the edge of a measuring cup or spoon, scraping away the excess dry ingredient
Meringue	a mixture of stiffly beaten egg whites and sugar which is lightly browned in the oven
Mix	to combine ingredients
Mold	to mix, knead, or press into required consistency or shape
Scant	to fill a little less than a full measure. A scant teaspoon would be slightly more than 3/4 and less than one full teaspoon
Sift	to separate into fine particles with a sieve
Soufflé	a baked dish that is made light by folding in stiffly beaten egg whites, as with cheese souffle
Steam	to cook in steam with or without pressure
Steep	to let stand in a liquid below the boiling point in order to bring out flavor, color, and other qualities
Stir	to mix food materials with a circular motion
Timbale	drum shaped pastry filled with a creamy mixture of chopped or pureed meat, vegetable, or other foods combined with eggs; pastries are cooked on a timbale iron
Toast	to brown with dry heat
Whip	to rapidly beat cream, eggs, or gelatin dishes to incorporate air and increase volume

QUESTIONS:

Without referring to the word lists, work the crossword puzzles on food preparation terms on the following pages to test your understanding of food preparation and terminology.

CROSSWORD PUZZLES FOR TERMS USED IN FOOD PREPARATION

A. MEATS CROSSWORD PUZZLE



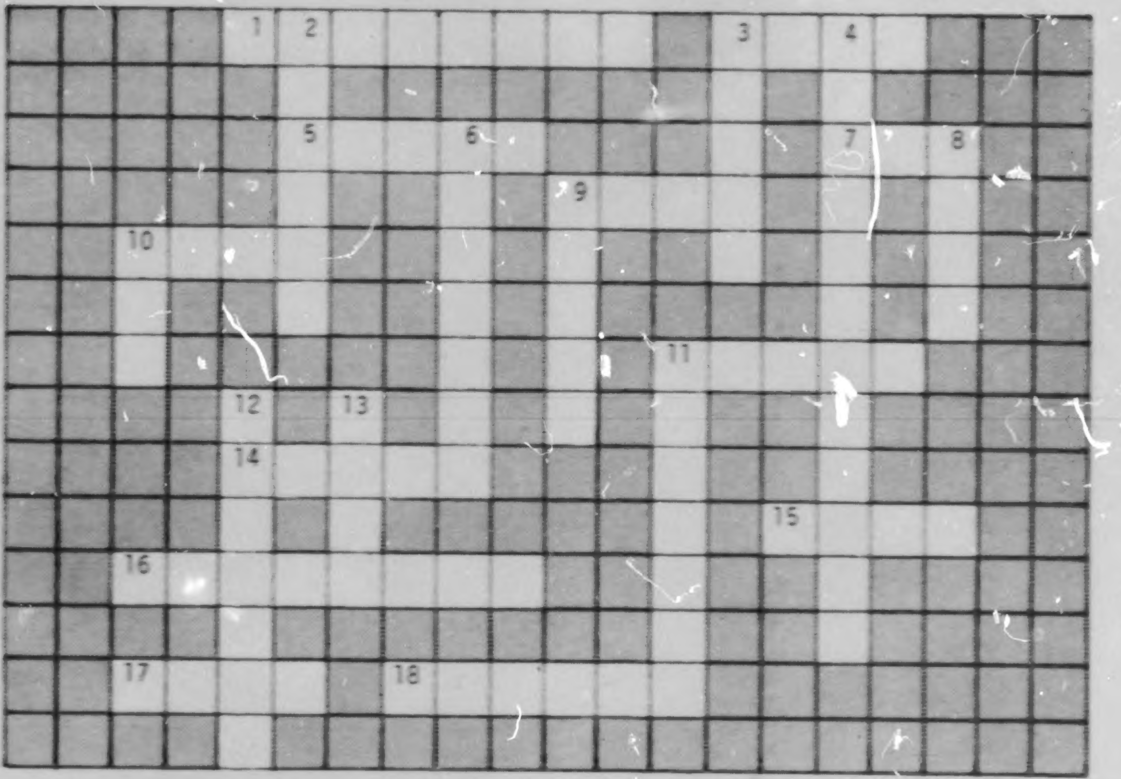
ACROSS:

1. To let food stand in a marinade
4. To cook by braising (fowl, rabbit, veal)
7. To roll in bread crumbs
8. Any form of pork fat
10. To brown surface of meat
11. To spoon liquid over food as it cooks
13. To separate raw meat from bone
14. To pack a mixture into a cavity
18. To cook slowly in a covered utensil
20. Mixture of fat and browned flour
21. To coat with flour or other substance
22. To cut into squares about 1/2 inch in size
23. To secure the wings and legs of a bird with pins or twine

DOWN:

2. To bake uncovered
3. Food dish served as the main course
4. To break into small bits by using a fork
5. Meat, etc. shaped into cones, breaded, and fried or baked
6. To improve flavor by adding salt, pepper, or spices
7. Clear broth from meat juices
9. To dip in a smooth mixture of flour and liquid
11. To cook by a direct heat source
12. To cover with sauce or vegetables
15. To reduce to particles by cutting, crushing, or grinding
16. To coat or top with crumbs
17. To cook by exposure to direct heat
19. To make thin parallel cuts in one or more directions on food surface

B. SALADS, VEGETABLES, AND FRUITS CROSSWORD PUZZLE



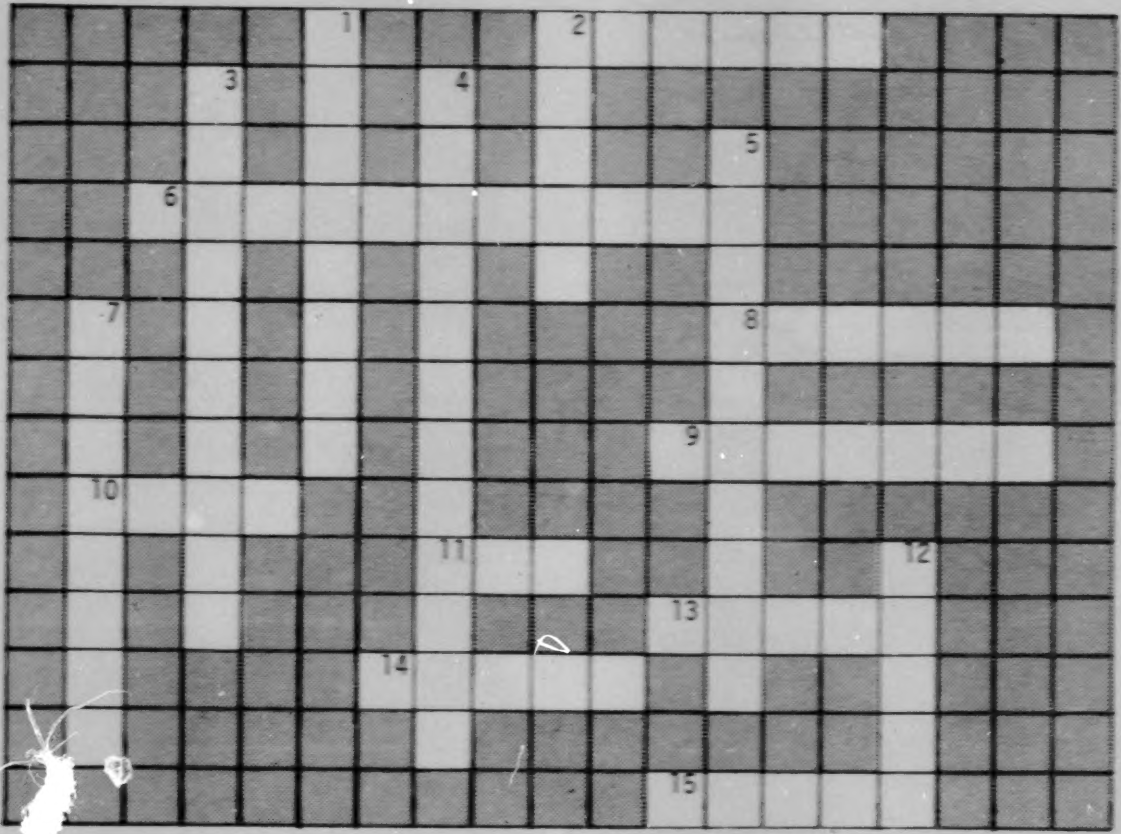
ACROSS:

1. Dishes prepared with a sauce, etc., then baked
3. To cut off outside covering with a knife or other utensil
5. To cut or chop into very small pieces
7. To divide food into small pieces
9. To remove the core or center of fruit
10. To strip off the outside covering by hand
11. To form flakes using a grater
14. To place in refrigerator until cooled to 40-45° F. (4.4° - 7.2° C.)
15. To remove the stem and cap from berries
16. To cut foods into the size and shape of matchsticks
17. To cut into pieces with sharp knife or other tool
18. To dip into boiling water or to remove skins or precook

DOWN:

2. To loosen and remove from a container
3. To force cooked foods through a strainer
4. To restore concentrated foods to their normal state
6. To cause foods to become thick by lowering the temperature
8. To bring to a temperature above freezing
9. To cook in a heavy syrup or sugar
10. To remove the stone or seeds from fruit
11. To add a decoration to food to make it more attractive
12. Layers of thinly sliced food and seasonings covered with a liquid and baked
13. To cut into small cubes

C. SURFACE COOKING CROSSWORD PUZZLE



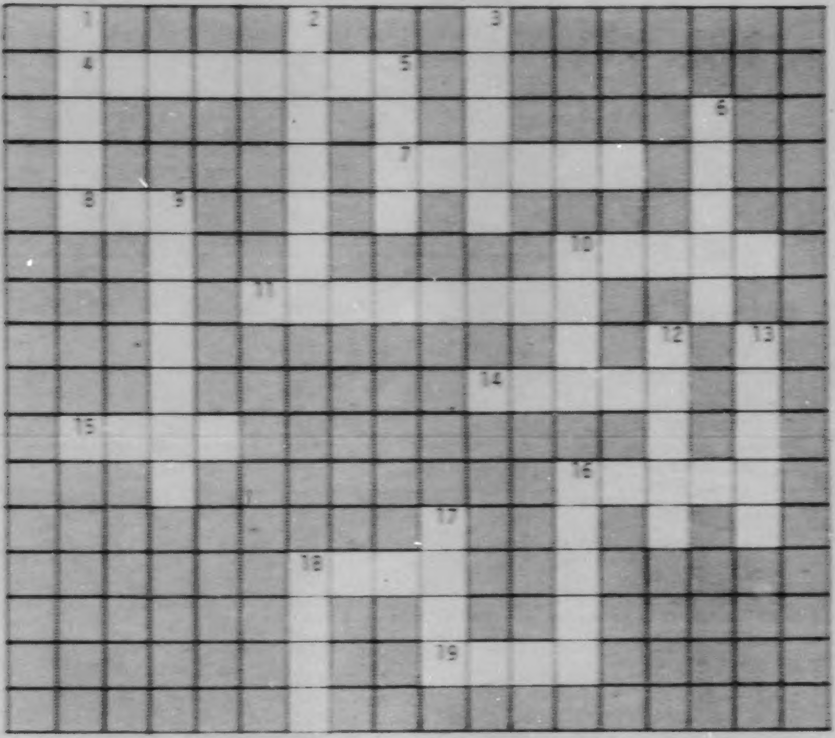
ACROSS:

2. To cook in a liquid at a temperature of about 185° F. (85° C.)
5. To lessen the strength of a mixture
6. To cause to form crystals
8. To cook in a small amount of fat
9. To cook uncovered on a hot ungreased surface, pouring off fat and liquids as they accumulate
10. To cook in water or other liquid
11. To cook a vegetable in a tightly covered skillet in a small amount of fat
13. To fry, saute, or toast on a solid heated surface
14. To cook in a hot liquid, being careful to retain shape
15. To brown quickly in a small amount of fat

DOWN:

1. To combine or mix a solid with a liquid until a solution is formed
2. To heat to a temperature just below the boiling point
3. To heat sugar, or foods containing sugar, until brown
4. To coat a metal spoon with a film of thickened sauce
7. To cook uncovered on a hot, ungreased surface
12. To coat with a thin sugar syrup cooked to the cracking stage

D. BAKING AND PASTRY CROSSWORD PUZZLE



ACROSS:

4. To remove excess dry ingredient from a measuring cup or spoon
7. To make light by an agent
8. To cover with small particles
10. To spread melted fat with a pastry brush
11. A mixture of stiffly beaten egg whites and sugar
14. To cut fat into small particles in dry ingredients
15. To mix, knead, or press into required shape or consistency
16. To fill a little less than a full measure
18. To separate into fine particles with a sieve
19. To rapidly beat ingredients to incorporate air and increase volume

DOWN:

1. To thoroughly mix two or more ingredients
2. A very light baked dish
3. To beat one or more foods until smooth and creamy
5. To mix by cutting vertically through ingredients and by turning them over
6. To brown with dry heat
9. A drum shaped pastry mold filled with a creamy mixture of meat, vegetables, and eggs
10. To mix until smooth, using an up and over motion
12. To press, fold, and stretch a dough
13. To make an edge with a scalloped effect
15. To combine ingredients
16. To let stand in liquid below the boiling point
17. To simmer in a small quantity of liquid
18. To mix food materials, with a circular motion

ASSIGNMENT:

I. Prepare a Word-a-gram" using the terms used in food preparation. For the "Word-a-gram" choose one of the following topics: (a) meats; (b) salad, vegetables and fruits; (c) surface cooking; or (d) baking and pastry. (Try to use all of the terms in the group you choose.) Here is an example using the months of the year.

```
          J                         M A R C H
    J A N U A R Y         N           P
      U   N               O C T O B E R
      G   E     F         V           I
      U       D E C E M B E R         L
      S         B         M
S E P T E M B E R         B
          A     U         E
          Y     A         R
                R
          J U L Y
```

GROUP WORK:

I. Divide into two teams to play "Cooking Charades." Place cooking terms on individual sheets of paper in a container. Each team takes turns acting out a cooking term which is drawn from the container. The team identifying the most terms is the winner.

II. Study the list of common measures and abbreviations used in food preparation. Divide into two teams to play "Jeopardy." Place a small bell on a desk. The leader calls out answers about the measures and abbreviations. The first, second, etc. person in line must run up, ring the bell, and give the answer in the form of a question. Example: Leader says, "May be written as T., tb., or tbsp." Student would say: "What is the abbreviation for tablespoon?" Student may confer with team members before ringing the bell, but he must answer immediately after ringing the bell. Leader should repeat questions for reinforcement.

UNIT VIII-3

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Convenience Foods

TASK: 14. Read recipe, know terminology, and follow directions.

OBJECTIVES: When you finish this lesson, you should be able to
a. identify convenience foods
b. list reasons for using convenience foods.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. p. 96.

Food service establishments are using more convenience foods today than ever before. The increased use of convenience foods is due to:

1. a shortage of trained personnel due to the lack of culinary schools in the U.S. and to the reduced immigration of trained personnel from other countries.
2. an increase in "eating out" and the public's desire for new dining experiences.
3. technological advances in refrigeration, processing, and packaging.

As a result, the food service industry is using more convenience foods. Food service establishments vary greatly in the type and number of convenience foods used. Some serve only convenience foods, some use only convenience entrees, and others only a few convenience ingredients.

A convenience food requires little preparation at serving time because it has been pre-prepared by someone else. Convenience foods are available in several forms: fresh, frozen, freeze-dried, dehydrated, and canned. Some examples of convenience foods include: pre-cut portions of fish, meats, or poultry (uncooked or partially cooked); frozen or canned fruits and vegetables; cleaned and packaged fresh, chopped or shredded, peeled and cut fruit for use in salads, and desserts or as garnishes. Other examples of convenience foods are cake and other baked-product mixes; soups; gravy, and sauce bases; and packaged individual portions of condiments and beverages.

Convenience foods are not new; in fact, some have been used for many years. Sausage, gelatins, and packaged pudding mixes are among the oldest convenience foods. Instant potatoes is one convenience product that has been accepted by a majority of food service establishments. They come in flakes or granules and have a natural flavor, a white color, and the mealy (not sticky) texture of a perfectly prepared product. In addition to saving time and energy during preparation, instant potatoes offer the advantage of requiring less storage space. Three cases of #10 cans are equal to about 900 pounds of raw potatoes and require only one-eighth of the storage space. Having the potatoes in easy-to-handle cases and boxes instead of bins makes inventory simpler. Instant potatoes have many uses as ingredients for soups, as thickening in gravies and sauces, as an ingredient in batters for coating vegetables and meats before deep frying, and as an ingredient in muffins and biscuits, stews and casseroles, salads, cakes and confections.

Recent innovations have made gelatins and puddings even more convenient. Gelatin has traditionally been prepared from a base of animal protein, but the new gelatins are made with a base called carragenan. Carragenan is a vegetable protein derived from marine plant life. The gelatins made from this new base product set in 15 minutes without refrigeration. Molds stand at room temperature without becoming rubbery or melting. Fruits and vegetables may be added within a matter of minutes. A molded gelatin "pops" right out of the mold without using hot water. Additional convenience in puddings has been achieved through canning. Canned puddings are spooned directly into dessert dishes for serving.

The quality of some convenience foods is higher than that of regularly prepared foods. The convenience foods are processed when the nutritive value of the foods is at its peak. They are processed rapidly to retain nutrients and are either canned or quick frozen immediately. Fresh foods may incur a high loss of nutritive value as they pass through the various steps in marketing. The convenience foods also have a more consistent quality due to the rigid standards under which they are processed.

Today a variety of convenience foods are available, including entrees, soups, sauces, vegetables, fruits, salads, and desserts. Menus which use convenience foods are limited only by the imagination of the menu developer. For instance the menu selection for entrees in a restaurant might include:

Mushroom Gravy and Sirloin Tips
Meat Loaf with Tomato Sauce
Ham Steak with Pineapple Sauce
Chicken in Curry Sauce
Roast Boned Duckling a l'Orange
Lobster in Hollandaise Sauce
Shrimp Creole with Buttered Rice

New equipment which speeds the preparation of convenience foods includes:

1. microwave or electronic ovens which cook in minutes the same food that requires hours in a regular oven.

2. reconstituting ovens (combination freezers and ovens), which are capable of storing up to 360 pounds of frozen foods at 0° F. (-17.8° C.) and then heating the food to 165° F. (73.8° C.) in 55 minutes.

The labor shortage has created a demand for more and more convenience foods in order to meet the demands of a steadily increasing business. The cost of using convenience foods is usually higher than the cost of regularly prepared foods. The labor cost is lower, sometimes as much as 20 to 25 per cent. Space requirements for food preparation may be reduced from 5 to 20 per cent. The preparation equipment needed may be as much as 20 per cent less. These reductions more than offset the higher cost of using the convenience foods. Further savings occur because waste is almost entirely eliminated. There is less leftover food and less waste in cleaning and portioning foods. Another advantage is that portion sizes can be standardized and the cost per portion more accurately determined.

This modern approach to food preparation allows management to put to use the talents of young, inexperienced employees who may be working their way through school, or perhaps of young housewives who only want to work part-time. Employees working with convenience foods need an ability to add seasonings and spices to convenience foods and to plate and garnish foods attractively.

QUESTIONS:

1. What is a convenience food?

2. List five examples of convenience foods.
   a.
   b.
   c.
   d.
   e.

3. What are four processes used to preserve convenience foods?
   a.
   b.
   c.
   d.

4. A food service operation that uses only conveneince foods is called a (an)
   _____a. fast food business.
   _____b. convenience food flow system.
   _____c. vending self-service system.
   _____d. automated food system.

5. One of the factors leading to greater use of convenience foods is a shortage of
   _____a. regular food.
   _____b. equipment.
   _____c. personnel.
   _____d. business.

6. The use of convenience foods provides all of the following except
   _____a. a reduction in preparation time and labor.
   _____b. a reduction in amount of "leftover" food.
   _____c. a lower priced food item.
   _____d. more standardization in size or portions.

7. The quick-setting quality of the vegetable protein gelatins is a major advantage over the traditional animal protein based product. The new gelatin can be expected to set in
_____a. 20 minutes.
_____b. 15 minutes.
_____c. 10 minutes.
_____d. 7 minutes.

8. The higher cost of convenience foods is offset by reductions in all but the amount of:
_____a. space needed.
_____b. equipment needed.
_____c. labor needed.
_____d. food needed.

9. The quality of convenience foods may be higher than regular foods because convenience foods are
_____a. processed at the peak of nutritive value.
_____b. prepared in small amounts.
_____c. processed in large quantities.
_____d. prepared in the maximum amount of time.

10. The consistency of quality in convenience foods is due to quality control standards used during
_____a. cooking.
_____b. preparation.
_____c. processing.
_____d. serving.

11. A reconstituting oven is an appliance used in preparing convenience foods. It is a combination of
_____a. refrigerator and oven.
_____b. freezer and oven.
_____c. cold storage and food warmer.
_____d. food warmer and defroster.

12. Using instant potatoes offers all except one of the following advantages:
_____a. preparation requires less time and energy.
_____b. requires less storage space.
_____c. requires no inventory.
_____d. requires no paring.

ASSIGNMENT:

I. List the convenience foods used at your training station and describe the various ways in which they are used.

GROUP WORK:

I. Share the lists you made in the above assignment with other food service employees. Compare and contrast the use of convenience foods in each of the food service establishments in which you are employed.

UNIT VIII-4

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Techniques of Portioning Food

TASKS:
15. Assemble food orders and place them on plates and trays.
16. Verify orders by scanning filled plates to insure specified portion and quality of food.

OBJECTIVES: When you finish this lesson, you should be able to
a. cite reasons for portioning food
b. list methods used to portion foods for serving.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. p. 112.

The management of the food service operation determines the appropriate portion size or the amount of food to be served to the guest. This decision is influenced by the type of meals, food choices, serving methods, kind of customers, and cost of food and supplies. A restaurant which caters to truck drivers likely serves larger portions than a tea room which attracts women shoppers. As a rule, hospital portions are determined by the dietary needs of the patient.

Establishing the size of a portion:

1. Enables food service personnel to request correct amounts of food and supplies without overstocking.

2. Helps make possible the serving of freshly prepared food daily, thus preventing the necessity of serving or planning the use of leftovers.

3. Cuts down on waste and loss of food nutrients by insuring adequate but not overly large servings, thereby reducing food cost.

4. Prevents underproduction as well as overproduction of food to be served, by using standard yields, recipes, and purchases.

5. Simplifies food preparation.

6. Satisfies the guests' food expectations by insuring that the same amount of food is served each time an order is filled.

7. Helps provide attractive and uniform servings. Many institutions purchase foods which have been pre-shaped or cut into standard sizes. The most common ones are for the protein portion of the meal, such as meat loaf, chicken, and dressing.

8. Assists in establishing a cost control system.

Regardless of the size, the portion should appear ample without looking too standardized. One may accomplish this by selecting the proper size and color of plate. A large amount of food on a small plate may appear sloppy. A small amount of food on a large plate appears inadequate. The appearance of food can be improved with the addition of a colorful garnish.

The selection and use of the proper equipment for portioning foods makes the task easier. The food service employee should become familiar with the established list of portion sizes used in his training station. The list includes portions per pound, piece, slice, package, or count volume. Examples are: 1/4 lb. hamburger, 2 pieces chicken, 1 slice ham, 1 pkg. salt, and 1 med. orange per serving or portion. The employee should learn the size dish or plate on which foods are to be served and the equipment that is required for serving specified foods.

Pre-portioning certain foods assures serving the correct amount during the busy period. Some foods are portioned before cooking, some after. Accuracy in pre-portioning is made possible by using the following equipment and pre-packaged foods.

1. Standard size pans which permit the food to be cut into the number of servings indicated in the recipe. The use of a stainless steel ruler or marked pans insures accurate portions. Examples: brownies, gelatin salad, cake.

2. Standard scoops, ladles, dippers, spoons, and tongs in various sizes for specific foods. Examples: mashed potatoes, ice cream, gravy, sandwich fillings, some salads and desserts, meat balls.

3. Individual, correctly-sized casseroles, molds, custard cups, soufflé cups, and other dishes. Examples: macaroni and cheese casserole, baked custard, gelatin salads.

4. Standardized scales for weighing portions. Examples: meat, yeast breads, cake batter, special diet foods for patients.

5. Slicing machines or slicers which give portions of the correct size for breads, vegetables, and meats. Cutters and slicers are also used for butter and cheese.

6. Individual size cream pitchers and individual pots or vacuum containers for hot beverages.

7. Pre-packaged portions of sugar, catsup, mayonnaise, salt, pepper, crackers, cereal, milk, ice cream, and other goods.

8. Meats purchased in slices and served or cut into the desired number of uniform servings. Examples: pre-portioned hamburger patties, Salisbury steak.

If serving food is one of your tasks, make the serving the exact size specified by your supervisor. The attitude of employees toward food portioning can "make or break" a food service establishment. Giving a friend or a good customer extra food or failure to use the size dipper or ladle specified for the food can cost many dollars and result in decreased profits through loss of customers. An employee's indifference toward his role in keeping costs down can soon cost him his job.

QUESTIONS:

1. Portion control means ____.

2. The amount of the portion of food to be served is decided by the
   ____.

3. Portioned servings are necessary for an efficient, economical food service operation. Factors used to determine portion sizes and amounts are:
   a.
   b.
   c.
   d.
   e.

4. Management studies in food service operation consistently stress the importance of serving portioned food. What are five possible results of not serving portioned foods?
   a.
   b.
   c.
   d.
   e.

5. What can be done to make pre-determined portions look appetizing when served?
   a.
   b.

6. Name five pre-packaged items that may be used in serving customers.
   a.
   b.
   c.
   d.
   e.

Accuracy in pre-portioning is made possible by the use of the following equipment. For each piece of equipment listed locate the food item associated with it. Place the letter corresponding to your choice in the blank to the left of each piece of equipment. Food items may be used more than once.

Pre-Portioning Equipment

_____ 7. Standard size pan

_____ 8. Standard scoop, dipper

_____ 9. Individual baking dish

_____10. Standard scales

_____11. Standard slicer

_____12. Pre-packaged portions

Food Item

a. Bread

b. Cereal

c. Gelatin Salad

d. Ice Cream

e. Macaroni and Cheese Casserole

f. Meat

ASSIGNMENT:

I. List and explain food portioning techniques which are used at your training station.

GROUP WORK:

I. Share the food portioning techniques used at your training station with class members. Discuss the advantage of each food portioning technique.

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Work Simplification and Work Schedules

TASK: 17. Plan work schedule so foods are ready at serving time.

OBJECTIVES: When you finish this lesson, you should be able to
a. define the purpose and need for work simplification
b. apply motion economy principles to job performance.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A Bennett, Co., Inc., 1974. pp. 270-271.

The increased minimum wage is making it necessary for managers of food service establishments to look for ways to improve the efficiency of their operations. Each employee must perform a day's work for a day's pay if the food service establishment is to operate within its budget. One cause of inefficient operation is employee fatigue, which results in a drop in energy, enthusiasm, and output.

There are two types of fatigue: physical and mental. Physical fatigue results from muscular exertion. Mental fatigue is a slowing down of nerve impulses. The employee feels tired although he is not physically tired. Fatigue may be due to factors in the employee's personal life, such as lack of sleep, problems at home, or poor diet. In many cases fatigue may be due to working conditions or procedures on the job.

One method of reducing employee fatigue is work simplification. Work simplification has been defined as "seeking the simplest, easiest, and quickest method of doing work." This does not mean that the employee must work harder and faster, but that the nonessential parts of the operation are eliminated. Every task is divided into (1) getting ready (setting up equipment), (2) doing (actual production), and (3) putting away (cleaning up and putting away).

Some general work simplification guides to follow for reducing fatigue and increasing the efficiency are:

1. Plan ahead--think through all the steps in the task before beginning.
2. Eliminate unnecessary steps or movements.
3. Assemble all supplies before beginning work.
4. Select the best tools for the job.
5. Keep your mind on your work.
6. Maintain good posture.
7. Clean up as the job is completed.

RULES FOR MOTION ECONOMY

RULE	EXAMPLE
1. Use hands in unison or move arms at the same time.	1. When placing a carton of milk and an empty glass on a tray, reach for the carton with the left hand and for the glass with the right hand.
2. Move arms simultaneously in opposite and symmetrical directions.	2. When preparing a tray of salad plates, hold plate in left hand and put lettuce on plate with right hand, etc; when counter space is limited both hands are involved by using left hand to bring food close to area for the right hand.
3. Use natural rhythm with continuous curved motions.	3. When washing a table top, surface of refrigerator, etc. use continuous curved movements and avoid using straight-line movements that stop and start.
4. Use the smallest part of the body that produces the best results.	4. Use the touch of a finger to start the garbage disposal.
5. Use motions that are easiest for the worker.	5. A right-handed person prefers to work with the right hand and arm and with the first and second fingers; a left-handed person prefers to work with the left hand and arm.
6. Use tools or equipment to free hands and fingers.	6. Use trip device on coffee urn spigot to free hands to hold cup and saucer.
7. Use gravity to do work.	7. Chop food item on a board near edge of sink and let the chopped pieces fall into a container in the sink.
8. Arrange tools, equipment, and supplies within normal reach area.	8. Place tools, equipment, and supplies neatly and in the normal reach area to avoid searching for needed equipment.
9. Follow sequence of proper motion through location of tools and supplies.	9. Arrange tools, equipment, and supplies in proper order for sequential use within normal reach area.
10. Work at a comfortable height.	10. Work surface should be 2 to 4 inches below the worker's elbow when worker is using a small hand tool, such as a paring knife or a pastry tube.

Let's follow Susie while she carries out one of her jobs to see how motion conscious she is. She reads on the work schedule that she is to prepare the salad for the noon meal. The first item on the recipe card is lettuce, so she goes to the walk-in refrigerator, gets four heads of lettuce, takes them to the sink, and then returns to get four more heads of lettuce. The procedure she follows to remove the cores is to bend over the sink, pick up the lettuce in her right hand, transfer it to her left hand, pick up the knife, remove the core with her right hand, and put the head of lettuce on the drainboard.

Next Susie carries the lettuce, two or three heads at a time, to the salad area. After tearing the lettuce leaves into bite-size pieces, she looks at the recipe again. Carrots are listed as the next ingredient. Susie goes back to the walk-in refrigerator, picks up the carrots and walks to the sink. She then goes over to the drawer to get a French knife to peel the carrots and then slices them, one at a time, holding the carrots in her hands.

The next ingredient is celery. After going to the walk-in for the celery and carrying it to the sink to mince it, she goes back to the drawer to get a paring knife to cut the celery into small pieces. She cuts one stalk of celery at a time and then picks up the pieces and puts them in the salad container.

What rules of work simplification and motion economy did Susie break? Refer to the information in this unit and see if you can catch her mistakes.

Were these the mistakes you found?

1. Susie wasted many steps collecting the ingredients and tools for the salad. If she had carefully read the recipe she could have taken a tray or large container to the refrigerator and picked up all the items in one trip. She could also have made only one trip to the drawer for knives if she had planned ahead. She needs to learn to "eliminate unnecessary steps" and to "assemble all supplies before beginning to work."

2. Susie violated Rule 1, "use hands in unison," when she changed hands so often while coring the lettuce.

3. Bending over the sink instead of putting the lettuce on a more comfortable working height, was a violation of Rule 10, "work at a comfortable height."

4. The use of a French knife to peel the carrots and her failure to put the carrots down on a cutting surface when slicing them was a violation of Rule 5, "use motions easiest for the worker." Using a French knife for peeling would be awkward and tiring and was not the best tool for the job.

5. Use of a paring knife, instead of a French knife, to chop the celery was another violation of Rule 5 and another poor choice of equipment. Susie could also have used Rule 7, "use gravity to do work," if she had chopped the celery on a board near the edge of the counter and then pushed it into the salad container.

Susie's situation is exaggerated, but many workers waste motions without being aware that there is an easier, quicker way to do things. Think about the way you carry out your duties. Don't be an employee like Susie--make every motion count and you will not be so tired at the end of the work period.

QUESTIONS:

1. When Mr. Robinson talked with June about her job as a food service employee, he discussed the two types of planning that are used to obtain good worker productivity. What are they?
   a.

   b.

2. What is work simplification?

3. Mrs. Mayes, the assistant cook, was explaining Luby's tasks as cook's helper. She said, "Work simplification is one of the most valuable skills you can learn and apply to your job." What are the steps in work simplification?

4. At one of the meetings for new employees, Joe heard an industrial engineer say that, "One of the big enemies of production is fatigue." Then he discussed the two types of fatigue which all workers experience. What are they?

5. What does "work smarter, not harder" mean?

6. What is the result of using the rules of motion economy?

7. What are the three parts of every job?
   a.
   b.
   c.

8. Which rule of motion economy could be used by the food service employee to most efficiently perform the following?
   _____a. Arrange lettuce and peach halves on salad plates.
   _____b. Start garbage disposal.
   _____c. Wash surface of a refrigerator.
   _____d. Chop ingredients for a salad.
   _____e. Make sandwiches.

9. Today, Juan has been assigned to help prepare salads. The salads are a chef's salad, a gelatin salad, cabbage slaw, and potato salad. They should be completed and ready to serve in four hours. Which salad should be prepared first? Why? Which salad should probably be made second?

Place an X in the correct blank to indicate whether each statement is True or False.

10. A plan of work will help you accomplish more.
_____a. True
_____b. False

11. Each job can be simplified.
_____a. True
_____b. False

12. One should work at top speed in order to get more done.
_____a. True
_____b. False

13. Posture does not affect the use of energy in any activity.
_____a. True
_____b. False

14. Job training is not necessary; anyone can do food service work.
_____a. True
_____b. False

15. Fatigue is an enemy of production.
_____a. True
_____b. False

16. Work simplification is the study of tasks and operations to determine the most efficient method of performance.
_____a. True
_____b. False

ASSIGNMENT:

I. Analyze one job you do at your training station. What rules of motion economy could you apply to the job? (Turn this assignment in to your teacher.)

GROUP WORK:

I. Working in small groups or pairs, choose one task that you perform daily at your training station. Analyze the way each of you performs this task. Study the methods used by each member of the group. Then using work simplification rules, suggest ways to save time and energy while performing the task.

UNIT IX-1

COLD FOOD WORK STATION

SUBJECT: Beverages

TASKS:
18. Make beverages, such as coffee and tea, and place them in serving locations.
19. Follow standard procedures for preparing a variety of food.
20. Evaluate quality of food prepared.

OBJECTIVES: When you finish this lesson, you should be able to
a. describe procedures for making beverages
b. identify characteristics of quality beverages.

REFERENCES: Lewis, Dora S.; Peckham, Galdys C.; and Hovey, Helen S. Family Meals and Hospitality. New York: Macmillan Publishing Co., Inc., 1972. pp. 240-247.

Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 142-144.

COFFEE

Coffee is the most popular beverage in American restuarants. Coffee is served as an accompaniment to a meal either with the main course, with the dessert, or at the end of the meal. Coffee is also enjoyed as a special refreshment. Because coffee is a popular sign of hospitality for food service establishments, the food service employee needs to understand and observe the principles for making a good cup of coffee.

The ability to make good coffee is simply a matter of using the right combination of equipment, cleaning the equipment properly, and measuring the water and the coffee accurately. Coffee should be served hot and fresh. It should be sparkling clear and have a pleasing taste and aroma.

Underbrewing causes the coffee to have an unpleasant flavor, lack body, and taste watery. Overbrewing results in a bitter taste and cloudy or muddy appearance. Warming-over coffee results in an unpleasant, bitter, or oily taste.

Coffee used in food service is ground, instant, decaffeinated, freeze-dried, or a frozen concentrate. Ground coffee is available in regular, drip, and fine grind. Regular grind coffee is used for percolaters. The drip grind is recommended for drip and vacuum coffee makers; however, the fine grind may also be used for these coffee makers. Instant coffee is powdered coffee which readily dissolves in hot or cold water and requires no special preparation. Freeze-dried coffee is an instant coffee blend. It is easy to recognize because of its larger crystals. Freeze-dried coffee is prepared the same as instant coffee. Frozen coffee concentrate comes in cans that are used with a special dispenser. The dispenser heats the water to the correct temperature, proportions the hot water and the coffee concentrate, mixes and dispenses the coffee as needed. Decaffeinated coffee may be ground or instant. This coffee has coffee flavor, but it does not act as a stimulant because the caffeine has been removed.

In food service kitchens, coffee is generally made in either a coffee urn or the vacuum coffee maker. Both of these types of coffee equipment are discussed in Unit VI-3. Standard procedures for the preparation of coffee are given in the references.

TEA

Tea, the favorite beverage of the world, is the national beverage of the Middle East, the United Kingdom, and Asia. Tea is also a popular beverage in American food service establishments. It is usually served as a hot or as an iced beverage. Tea can also be served spiced (sweetened and seasoned with orange and lemon rind, cinnamon sticks, and cloves). In some food service institutions, such as nursing homes and child care centers, tea may be blended with fruit juices and other liquids for special occasions.

Tea is available for quantity preparation in various forms, such as bulk or loose tea leaves, individual tea bags, gallon-size tea bags, and instant tea. Bulk tea (tea leaves) must be measured and placed in a cheese cloth or tea ball. The standard portion to use is 1 ounce of tea to 1 gallon of boiling water. Gallon-size tea bags may be used in place of bulk tea for quantity preparation. The individual tea bag may be used by the customer with boiling water to make one or two cups of tea. Instant tea is a powdered tea which requires no special preparation and can be made with hot or cold water.

The accepted standards for tea are that it be clear, mild in flavor, and free from tea leaves. Good tea may be attained by using clean equipment and by using the appropriate amount of tea for the amount of water.

Tea is made by pouring boiling water over tea leaves or bags and allowing it to steep (soak) from 3 to 5 minutes. Tea that is very strong may be cloudy; however, when cold water is added it becomes clear. Tea should not be boiled since boiling causes a bitter flavor. Equipment used in the preparation of tea is discussed in Unit VI-3.

COCOA AND CHOCOLATE

Cocoa and chocolate are popular beverages and can be served as an accompaniment to a meal or as a special refreshment. They can be served hot or chilled. Since cocoa and chocolate are made with milk, they contribute important nutrients to the daily diet. Directions for the preparation of cocoa and chocolate are given in the references.

QUESTIONS:

1. A good cup of coffee requires, among other things,
   _____a. level standard measurements.
   _____b. heaping measurements.
   _____c. a person who estimates well.

2. Boiling water should be poured over the coffee grounds with a
   _____a. quick, up and down motion.
   _____b. slow, back and forth motion.
   _____c. steady, circular motion.

3. Coffee in the urn should be held at a temperature of
_____a. 212° F. (100° C.).
_____b. 185° F. (85° C.).
_____c. 140° F. (60° C.).

4. The lower bowl of the vacuum coffee-maker is filled to the correct level with
_____a. fresh, cold water.
_____b. boiling water.
_____c. carefully measured coffee grounds.

5. a. What are the results of underbrewing coffee?

b. Overbrewing coffee?

6. Accepted standards for tea are
a.
b.
c.

7. How is tea affected by boiling?

8. Describe the procedure for making tea.

9. Accepted standards for cocoa and chocolate beverages are
a.
b.
c.
d.

ASSIGNMENT:

I. Compare the methods for making coffee, tea, and cocoa at your training station with procedures described in references. Check to see if you can improve the way you prepare beverages.

GROUP WORK:

I. View a film which stresses the importance of coffeemaking in the food service business. Compare the brewing procedures illustrated in the film with the procedure followed at your training station.

II. In small groups, prepare posters illustrating the accepted standards for coffee, tea, cocoa, and chocolate. (Each small group illustrates standards for one beverage). Display the posters on a bulletin board.

UNIT IX-2

COLD FOOD WORK STATION

SUBJECT: Salads

TASKS:
19. Follow standard procedures for preparing a variety of foods.
20. Evaluate quality of food prepared.

OBJECTIVES: When you finish this lesson, you should be able to
a. list different types of salads
b. describe procedures for preparing salads which retain nutrients and contribute to appearance
c. select salads appropriate for different functions in the meal.

REFERENCES: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett, Inc., 1974. pp. 132-134.

Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. Family Meals and Hospitality. New York, New York: Macmillan Publishing Co., 1972. pp. 139-148.

Salads add variety, crispness, color, and refreshing flavors to meals. Salads may be simple or elaborate. They usually contain combinations of vegetables, fruits, or both. A more hardy salad may include protein foods such as fish, meats, or eggs. Some salads are made with a gelatin base. Their ingredients make salads an excellent source of vitamins, particularly A and C, and minerals, especially iron.

Salads have four basic parts:

1. The base or underliner refers to the foundation of the salad. It is usually a leafy green vegetable. Other items such as cottage cheese may be used as a salad base.

2. The body refers to the main ingredients of the salad. The ingredients should be appropriate for the use of the salad. For example, a main course salad usually contains meat, fish, cheese, or eggs.

3. The garnish for a salad is anything used to make the salad more attractive. Items such as radish roses, carrot curls, and olives are often used to garnish salads.

4. The dressing that accompanies the salad provides seasoning. It should enhance the flavor of the salad.

Any part of the salad may be omitted except the body.

SALAD INGREDIENTS

Planning suitable combinations of color, flavor, and texture; handling ingredients carefully; and arranging ingredients creatively make a salad attractive. Ingredients used in salads must be clean, fresh, tender, crisp, and chilled.

Salad Greens

The most commonly used salad green is iceburg lettuce. Other frequently used lettuces include butterhead, bibb, romaine, curly endive, and escarole. Other leafy vegetables used in salads are turnip and mustard greens, regular or red cabbage, and Chinese cabbage.

Wash, drain, and crisp salad greens before using them. Wash salad greens carefully and thoroughly in warm running water to remove dirt and insects. Remove the tough stems, older ribbed outer leaves and any bruised or wilted leaves. To clean the lettuce, remove the core by hitting the core end sharply on the counter, then twist the core to remove it. Run water into the area where the core was removed and separate the lettuce leaves. Turn the core end down and drain. Crisp salad greens in the refrigerator or cover with a towel and ice.

All salad greens are fragile and must be handled with care. They bruise and discolor easily. Hand tearing or using stainless steel cutlery prevents discoloration.

Salad Vegetables

Many types of vegetables are used in salads. Either fresh or cooked vegetables may be used. Varied sized pieces should be used in salads for interest.

When preparing vegetables, be careful to preserve taste and texture. Remove the inedible parts of vegetables. Be sure they are free from defects. Drain canned vegetables before using.

To prepare vegetables such as carrots and celery, wash them thoroughly, pare them if necessary, and cut them to desired shape. Use a sharp stainless steel knife to cut vegetables to avoid bruising them during preparation.

To remove the skin of tomatoes, dip them into boiling water until the skin is loosened and then dip the tomatoes into cold water.

Store vegetables in the refrigerator if they are not needed immediately. For best results, place them in a container and cover them with a clean, damp cloth or plastic wrap before refrigerating.

If vegetables are not as crisp as desired, enclose them in a plastic bag with a small amount of ice and refrigerate for a few minutes.

Salad Fruits

Salads may include fresh, raw, canned, or dried fruits as ingredients. Some fruits, such as bananas, apples, pears, and avocados, turn dark when exposed to air. Dip these fruits in an acid solution to prevent darkening. Use lemon juice, fruit juice, vinegar and water, or citric acid and water. Remove inedible seeds, skins, and stems.

Protein Foods

Protein foods such as meat, poultry, fish, cheese, and eggs are used in main course salads. Sometimes leftover protein foods are used. They are often marinated in vinegar and oil with spices and herbs.

QUESTIONS:

1. Why do meals include salads?
2. List the six types of salads.
   a.
   b.
   c.
   d.
   e.
   f.
3. Describe the procedure for preparing lettuce for a salad.
4. How are vegetables made extra crisp?
5. How is darkening of fruits such as bananas or apples prevented?
6. Efficient salad preparation is important. Outline general procedures for assembling salads.
7. Describe two ways to prevent the loss of nutrients from salad greens and vegetables during preparation.
   a.

   b.

Place an X in the blank by the phrase which best completes each sentence.

8. A salad may be used as
   _____a. an appetizer.
   _____b. a side dish.
   _____c. a dessert.
   _____d. a main dish.
   _____e. all of these.

9. An example of a salad which may be used as an entree is
   _____a. potato salad.
   _____b. coleslaw.
   _____c. chicken salad.
   _____d. waldorf salad.
   _____e. tossed salad.

10. Which of these salads would be a good example of a side-dish or accompaniment?
   _____a. Frozen fruit salad
   _____b. Tuna salad
   _____c. Carrot-raisin salad
   _____d. Egg salad
   _____e. Chicken salad

Match the dressings below to their characteristics.

Characteristics	Dressings
_____11. Separates on standing	a. Cooked
_____12. A permanent emulsion	b. French
_____13. Made without oil	c. Cream
_____14. Has a limited storage period	d. Mayonnaise
_____15. Inexpensive but not as rich as other dressings	

ASSIGNMENT:

I. Choose one of the salads served at your training station and do the following.
   1) List the equipment required for preparation of the salad.
   2) List the necessary ingredients.
   3) Draw the work center and explain how the salad can be assembled in a quick and efficient manner.

   Turn this assignment in to your teacher.

GROUP WORK:

I. View a filmstrip on salad ingredients, dressings, and serving tips. Discuss the techniques shown in the filmstrip. List ideas you may be able to incorporate in your work at your training station.

UNIT IX-3

COLD FOOD WORK STATION

SUBJECT: Sandwiches

TASKS:
19. Follow standard procedures for preparing a variety of food.
20. Evaluate quality of food prepared.

OBJECTIVES: When you finish this lesson, you should be able to
- a. describe procedures for making sandwiches
- b. identify characteristics of quality products.

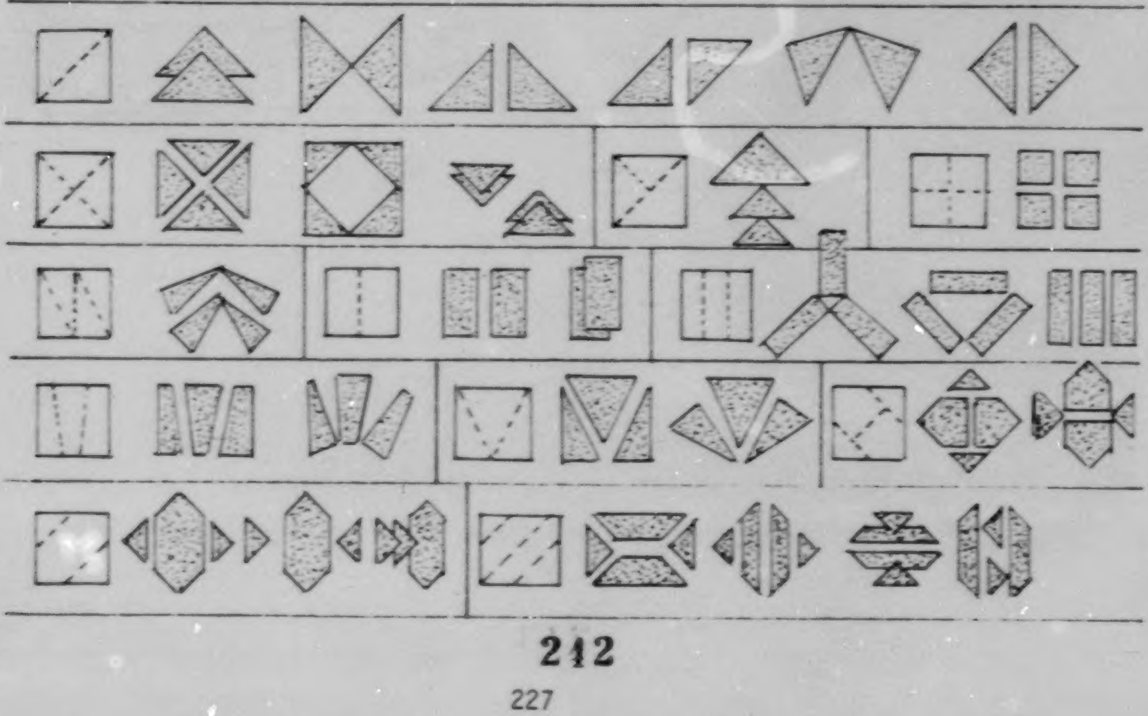
REFERENCES: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois, Chas. A. Bennett, Inc., 1974. pp. 134-137.

Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. Family Meals and Hospitality New York, New York: Macmillan Publishing Co., Inc., 1972. pp. 127-132, 396.

The sandwich is one of the most popular menu items in America. Sandwiches are served hot or cold, with or without gravy or sauce. They may be open-faced, closed, grilled, rolled, or multi-layered. Sandwiches are made of regular or specialty breads and may be filled, spread, or covered with a variety of items from meats and cheeses to jams, jellies, and specialty spreads.

Serving Sandwiches

Sandwiches may be cut in a variety of shapes. The cut sandwiches should be arranged attractively on the serving plate. Ways to cut sandwiches and arrange them in an eye-appealing manner are shown below.



QUESTIONS:

Connie is employed at a food service establishment. Her supervisor has assigned her to the sandwich-making area. Let's follow her through her first day's activities and see if you can answer her questions.

1. Before Connie started work, her supervisor gave her some hints about the quality expected. What would her supervisor have told her about the following?
   a. What should be included with sandwiches containing soft fillings?

   b. How much filling is a standard size portion for a sandwich?

   c. What suggestion might her supervisor have given her about spreading fillings in relation to the edge of the sandwich?

   d. What would she tell Connie about the cut edges of the sandwiches?

   e. What could be done to prevent the filling from soaking into the bread?

2. As Connie observed her co-worker spreading the filling on bread, she noticed the spreading motion used was ____________________.

3. After the sandwiches were made, Connie had the following questions.
   a. How high could she stack the sandwiches for cutting?

   b. What should she use to cover unwrapped sandwiches that need to be refrigerated for storing?

4. Connie's supervisor told her that it is very important that she use the amount of spread and filling specified. If more than the specified amount is used, there will not be enough ingredients for the required number of sandwiches. If not enough is used, the customer will be dissatisfied. Suppose Connie used 3 1/2 T. of spread per sandwich instead of the 2 1/3 T. specified. Instead of being able to make 102 sandwiches per gallon of filling, she will be able to make only 73. If the sandwiches sold for 50¢ each, how much would the business loose?
   $ ____________________.

5. a. What are party sandwiches?

   b. Draw and name three types of party sandwiches.

6. How is a sandwich loaf made?

7. List the qualities of a good sandwich.
   a.
   b.
   c.
   d.
   e.

ASSIGNMENT:

I. If you work in the sandwich area, write out the procedure you now use. What can you do to improve your work methods? Time yourself using the method you now use and then try the new plan you work out. Report the results of your experiment to your teacher and to your training sponsor.

GROUP WORK:

I. View a filmstrip showing how to make and wrap sandwiches by hand or machine. Discuss the differences and similarities in the techniques shown in the filmstrip and those used at your training station.

II. Form small groups and prepare a demonstration for class showing how to prepare and wrap sandwiches in quantity. Be sure to point out ways to simplify and speed the preparation.

UNIT IX-4

COLD FOOD WORK STATION

SUBJECT:	Garnishes and Condiments
TASKS:	19. Follow standard procedures for preparing a variety of foods. 20. Evaluate quality of food prepared.
OBJECTIVES:	When you finish this lesson, you should be able to a. cite ways to use garnishes b. describe procedures for preparing garnishes c. identify items known as condiments.
REFERENCE:	Cornelius, Ethelwyn G. Food Service Careers, Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 130-133.

GARNISHES

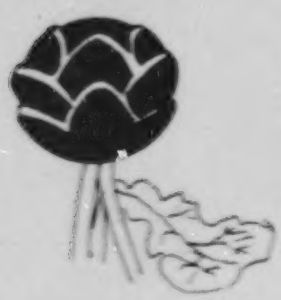
What makes the difference between plain food and something really special? It may be nothing more than a slice of lemon or a sprig of parsley, or perhaps a dash of nutmeg or cinnamon. The finishing touches placed on or around food are called garnishes. Garnishes add a touch of color or flavor to the food.

Some general suggestions for using garnishes are the following:

1. Use garnishes that can be eaten. However, little figures, flags or flowers may be used for special occasions.
2. A garnish should improve the appearance of the food with which it is served, but should not overpower it.
3. Balance the placement of garnishes on the platter or use the garnish in several spots. Odd numbers are usually more pleasing. For example, three lemon slices on a platter of fish are more interesting than four.
4. Experiment with garnishes, considering color, size, and texture. How would it look to use sliced beets on a plate of baked salmon? Or a maraschino cherry on a strawberry dessert? There should be a contrast between the garnish and the food.
5. Colorful, natural foods can be used to give very pleasing effects. Examples are paprika, pimento, lemon slices, fresh green onions, and stuffed olives.
6. Avoid using artificial colors. Blue and purple are not considered very appetizing.
7. Use fresh garnishes of high quality. There is nothing attractive about wilted parsley or dried lemon wedges.
8. Avoid garnishes with liquid sauces that run into the foods they accompany.
9. Try to keep the temperature of the garnish near the temperature of the food, or "protect" the garnish to keep it at the correct temperature. For example, placing cranberry jelly on a candied apple ring or mint jelly on an orange slice keeps the jelly from melting on a hot plate.
10. Avoid toothpicks in garnishes unless they can be seen easily.
11. Garnishes can be prepared ahead of time and placed in a refrigerator for use just before the main food item is to be served.

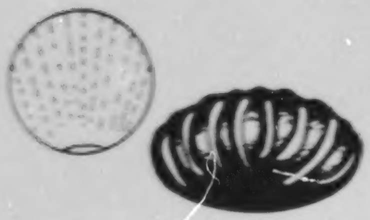
The following illustrations show common garnishes and how to prepare them.

RADISH ROSES:



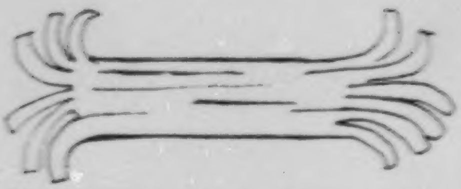
Wash radishes and cut off the root, but leave about an inch of the stem. Hold the radish, stem down. Use a sharp knife to make overlapping cuts down and into the sides of the radish. Do not cut completely through the skin, but just enough to make the red skin stand away from the center of the radish. Place in cold water to make the "petals" open and remain crisp.

RADISH ACCORDIONS:



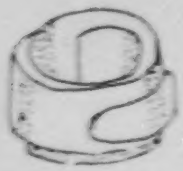
Remove the root and stem. Hold the radish lengthwise as shown. Using a sharp knife, make thin slices in the radish from the root end to the stem end, being careful to not cut completely through the radish. Place in cold water to force open.

CELERY FANS:



Cut celery into 2 1/2 inch pieces. Make short cuts, close together in one end. The other end may be cut in the same manner or left as it is. Place in cold water to make the celery curl. Green onion stems can be thinly cut in the same manner and will fan out in cold water.

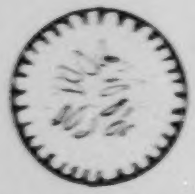
CARROT CURLS:



After peeling a large, thick carrot, cut very thin slices lengthwise with the peeler. Wrap each slice around your finger and secure with a toothpick. Place in cold water until crisp. Remove toothpick before serving.

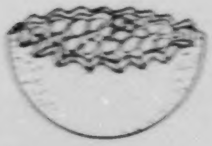
Very thin vertical carrot slices can be used as a base or nest for cottage cheese or other food instead of a lettuce leaf.

SCORED CUCUMBER:



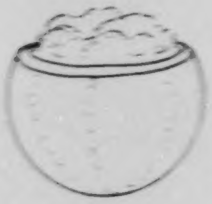
After washing cucumber, score it by running the prongs of a fork lengthwise along all sides. Slice as desired.

CITRUS CUPS:



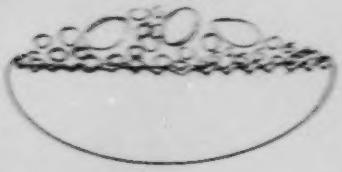
Cut in half with plain or saw-toothed edges. Remove pulp. Fill with gelatin salad, coleslaw, mixed fruit salad, cranberry sauce, or crushed pineapple.

TOMATO CUPS:



After slicing off top of tomato, hollow out a small portion. Mashed potatoes or bread crumbs can be used to fill the depression, then warm in the oven along with the meal.

MELON BASKET:



Slice a watermelon lengthwise and hollow out. A sawtooth edge adds to appearance. Using a melon baller, make balls of hollowed-out watermelon, cantaloupe, and honeydew melon. Put all the balls into the melon "boat." Scoops of sherbet can also be added for extra interest.

In choosing garnishes, keep in mind the taste combination of the garnish and the food and try to visualize the colors together. Anyone can "sling hash," but a little extra care can turn an ordinary plate of food into a work of art.

Uses for Garnishes

Garnishes can make many foods more appealing. The possibilities are endless. Consider some of the following suggestions.

Garnishes for soups are usually easy. Soup garnishes generally consist of something sprinkled, dabbed, or floated on top. Snips of parsley, sieved hard-cooked eggs, grated cheese, or bacon bits are often sprinkled on soup. Slices of salami, frankfurter, or egg may also be floated on the soup. Sour cream is sometimes dabbed on soup. Don't let the garnish cool the soup or delay the service.

Meat, fish, or poultry may be garnished with parsley, watercress, or curly endive. Lemon slices or wedges often garnish fish. Colorful vegetables may also be arranged attractively around meats.

Casseroles may be topped with grated cheese, tomato slices, sliced olives, or rings of green pepper. Triangles of sliced cheese could also be used to decorate a casserole.

Fruits, vegetables, and crisp salad greens need very little garnish. A colorful garnish may improve the appearance of meat, fish, poultry, macaroni, rice, and potato salads. Use salad greens, tomato wedges, sliced stuffed olives, sliced hard-cooked eggs, or chopped pickle to garnish these salads.

Candied and fresh fruits, nuts, coconut, or whipped cream and berries may add eye-appeal to custards, gelatins, and puddings. Cakes can be decorated with candies, fruits, coconut, and nuts. Try twisted lattice strips, pastry cutouts, or fancy slits in the upper crust to decorate a pie. Coconut, nuts, hard candy, and whipped cream may also be used to garnish pies.

CONDIMENTS

Some dishes are served with special sauces or accompaniments called condiments. A condiment is a seasoning for food, such as a sauce or a relish or even salt and pepper. Some condiments can be added in the kitchen. Examples of condiments include cocktail sauce with seafood; lemon with seafood; catsup and pickles with hamburger; steak sauce with steak; mustard and relish with hot dogs; cranberry sauce with turkey; syrup with pancakes; dressing with salads; butter with bread and rolls, crackers with soup, soy sauce with oriental dishes, butter, sour cream, and chives with baked potato; melted butter with lobster; cream and sugar with coffee; and lemon and sugar with tea.

QUESTIONS:

1. What are garnishes?

2. What are two reasons for using garnishes?
   a.

   b.

3. List three points to consider when choosing the number, color, and texture of garnishes to use with a food.
   a.

   b.

   c.

4. Is it a good idea to use toothpicks in garnishes? Why?

5. What is a condiment?

6. List three examples of a food and an appropriate condiment for the food.
   a.

   b.

   c.

ASSIGNMENT:

I. Note examples of garnishes used on foods pictured in magazines or newspapers or on food served to you when you eat in a restaurant.

GROUP WORK:

I. View a filmstrip on garnishes. List the garnishes used in your training station that were not shown in the filmstrip. Describe how to make these garnishes. Discuss your list with other students in the group.

II. Form small groups to compare and discuss the preparation and use of garnishes at your training station.

III. Plan a demonstration to show your class how to prepare and arrange simple garnishes for foods.

UNIT X-1

HOT FOOD WORK STATION

SUBJECT: Milk, Milk Products, and Eggs

TASKS:
19. Follow standard procedures for preparing a variety of foods.
20. Evaluate quality of food prepared.

OBJECTIVES: When you finish this lesson, you should be able to
a. identify forms of milk
b. identify types of milk products
c. describe principles involved in cooking milk products and eggs.

REFERENCES: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Company, Inc., 1974. pp. 126-127.

Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. Family Meals and Hospitality. New York, New York: Macmillan Publishing Co., Inc., 1972. pp. 222-228, 231-240.

QUESTIONS:

1. You are to prepare an order of scrambled eggs. Would you use large eggs or small eggs? Why?

2. Explain the difference in the preparation of a plain omelet and a fluffy omelet.

3. What is the effect of high cooking temperatures on eggs and products containing a large amount of eggs?

4. For each product, match the function(s) eggs perform in the preparation of the product.

PRODUCTS

______ Custards
______ Mayonnaise
______ Breaded fried fish
______ Yellow cakes
______ Souffles
______ Meat loaf

FUNCTIONS

a. Binding
b. Coating
c. Coloring
d. Emulsifying
f. Leavening
g. Thickening

5. List three points to remember when whipping egg whites to obtain a good product.
   a.
   b.
   c.

6. Identify foods which are milk products.

7. When cooking or heating milk or milk products, what temperature and length of cooking are necessary?

8. What can be done to prevent the formation of scum on top of hot milk?

9. If a scum does form on heated milk, what can be done to get rid of it?

10. A food service manager is concerned with reducing the cost of preparing a custard dessert. Which form of milk would he choose to lower the cost of the product?
    _____a. Whole fresh milk
    _____b. Dried milk
    _____c. Evaporated milk

11. When preparing a product such as cream of tomato soup, what can you do to prevent the acid in the tomatoes from curdling the milk?

12. What are three points to remember when whipping cream to obtain a good product?
    a.
    b.
    c.

13. What is the result of cooking cheese at a high temperature for a long period of time?

ASSIGNMENT:

1. List the forms (dried, fresh, etc.) and sizes of eggs used at your training station. Identify the dishes prepared with each form. Repeat the assignment for forms of milk used.

UNIT X-2

HOT FOOD WORK STATION

SUBJECT: Vegetables

TASKS:
19. Follow standard procedures for preparing a variety of foods.
20. Evaluate quality of food prepared.

OBJECTIVES: When you finish this lesson, you should be able to
a. identify the four classifications of vegetables
b. describe the correct procedures for vegetable cookery.

REFERENCES: Cornelius, Ethelwyn G. *Food Service Careers*. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 123-124.

Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. *Family Meals and Hospitality*. New York, New York: Macmillan Publishing Co., 1972. pp. 155-162.

Can you imagine a world of food without vegetables? Not only do vegetables provide beautiful colors and interesting textures for our meals, they can be used in a multitude of different ways. And, if that isn't enough, they're *also* important sources of vitamins and minerals.

All too often, food service operations neglect the importance of properly preparing vegetables. However, by using vegetables of high quality, good equipment, and correct preparation techniques, any food service establishment can serve vegetables that their patrons will long remember.

FORMS OF VEGETABLES

Many vegetables are available only at certain times of the year, or can be grown only in certain parts of the country. Due to modern transportation and storage methods, it is possible to have a wider variety of fresh vegetables all year than was available in the past. Vegetables are available year-round in various forms, and many commercial food service operations use all the forms of vegetables described below.

Fresh: Generally preferred for the best flavor. Must be washed and examined for removal of wilted leaves, coarse stems, and bruised or damaged portions.

Frozen: Similar to fresh in color and flavor. No washing is necessary; only need to be cooked and seasoned, thus saving time and effort in preparation.

Canned: Like frozen vegetables, canned vegetables can be stored easily and prepared quickly. Because of heat used in the canning process, flavor is usually altered.

Dried: Have most of the water removed. Drying changes the appearance.

PREPARATION OF VEGETABLES

1. Wash fresh vegetables carefully to remove soil and bacteria. Washing reduces deterioration.

2. If the surface of the vegetable is unbroken, soaking in salt water (1 Tb. salt per gallon of water) may help to loosen dirt.

3. Soak vegetables such as cauliflower, broccoli, cabbage, and brussels sprouts in cold salted water for half an hour to get out mites sometimes present in the leaves.

4. Remove bruised spots and parts of leaves.

5. Vegetables can often be crisped by placing in cold or iced water.

6. To preserve nutrients, remove only as much skin or peel as necessary.

7. To insure even cooking, use a sharp knife to cut vegetables into uniform pieces.

TYPES OF VEGETABLES

Vegetables can be classified into four main types. The cooking techniques used depend upon the type of vegetable.

1. High moisture with mild flavor. Examples include celery, spinach, peas, string beans. These vegetables require careful cooking to retain their mild flavor.

2. High moisture with strong flavor. Examples are cabbage, onions and vegetables from the turnip family. Proper cooking techniques reduce their strong flavor.

3. High moisture with high starch content. Irish and sweet potatoes are in this group. The starch must be cooked without loosing other qualities.

4. Low moisture with dry starch content. Examples include legumes, macaroni products, rice and cereals. They are cooked in a manner similar to group three above but using a large quantity of water.

METHODS OF COOKING VEGETABLES

Vegetables may be cooked by boiling, steaming, and baking. These techniques are described in the chart on p. 241. Other cooking techniques for vegetables are described on p. 243.

METHODS FOR COOKING VEGETABLES

Mild-Flavored, High-Moisture Vegetables	Strong-Flavored, High-Moisture Vegetables	High-Starch, High-Moisture Vegetables	Dry-Starch, Low-Moisture Vegetables
Boiling The best method for cooking this group. Use a small amount of water, only enough to cover the vegetables. Cook only until done to retain flavor and shape.	The best method for cooking this group. The cabbage and turnip groups should be cooked for a longer period. Cook uncovered to reduce the strong flavor of these vegetables.	Not the best method for cooking these vegetables. Boil gently to avoid breaking up the vegetables.	Legumes: Soak before cooking. Bring to boil, cover pot, and cook gently until tender. Macaroni Products and Rice: Stir into boiling salted water. Cover, bring to a boil, uncover, boil gently until tender or for 2 minutes, remove from heat, cover, let stand until tender. Cereals: Add to boiling salted water; stir until thick. Reduce heat, cover, simmer until done.
Steaming Most vegetables in this group can be steamed, but water must be added.	Same as for the mild-flavored, high-moisture vegetables.	The best method for cooking this group. Irish and sweet potatoes are sometimes partially steamed and then baked. French fries can be steamed until partially done and then deep fried.	Legumes: Soak, cover with slated water in solid basket; steam until skins crack. Macaroni Products and Rice: Add to boiling water in solid basket, stir 2 minutes to separate, steam until tender. Cereals: Bring salted water to boil, add cereal, stir to blend, steam until done.

Mild-Flavored, High-Moisture Vegetables	Strong-Flavored, High-Moisture Vegetables	High-Starch, High-Moisture Vegetables	Dry-Starch, Low-Moisture Vegetables
Baking Some, such as tomatoes, can be baked alone. Others may be partially cooked by boiling, then finished by baking. Those that do not bake well alone can be added to souffles and puddings or baked in a sauce.	These vegetables do not bake well alone, but can be combined with other ingredients or baked in a sauce or liquid.	A good method for preparing these vegetables. Cook in skins.	These products may be baked but must be cooked by boiling or steaming before baking.

Deep Frying

Potatoes are the most frequently deep-fried vegetable, but many other vegetables can be successfully prepared in this manner. A coating may or may not be used. Some vegetables may be partially cooked by boiling or steaming and then finished in deep fat.

To fry potatoes:

1. Dry potatoes well before frying.
2. Lower into fat and cook at 375° F. (190° C.) until done (about 7 minutes for 1/2 inch thick potatoes).
3. Or lower into fat and blanch at 375° F. (190° C.) until tender but not browned. Store under refrigeration for up to several days or for a longer period if frozen. To complete the cooking, cook in fat at 350-380° F. (177-193° C.) for about 2 minutes.

Many restaurants now use commercially blanched frozen potatoes. Potatoes may also be blanched under 7-10 pounds of steam for 1 to 2 minutes and then fried.

Grilling

Another method for cooking raw vegetables is sautéing or pan-frying. Vegetables such as potatoes may be sautéed on a griddle.

Pan braising is cooking in a covered container with a small amount of fat and liquid. High moisture vegetables are cut, shredded or diced, and placed in a skillet with 1 tablespoon of fat and 1 teaspoon of salt and 2 tablespoons of water per quart of vegetables. The container is covered and allowed to steam or braise.

Vegetables should be stirred occasionally. This is an expensive method of preparation, but produces a good product. Pan braising may also be done in a steam-jacketed kettle or an oven.

Oven Roasting. Vegetables are placed in a well-greased pan and put into the oven to fry. They must be stirred frequently.

Broiling. Usually vegetables are partially or completely cooked by steaming, braising or boiling and then placed under the broiler for a final browning.

QUESTIONS:

Match each vegetable with the type of vegetable to which it belongs.

TYPES OF VEGETABLES

_____1. High moisture-mild flavored
_____2. High moisture-strong flavored
_____3. Moist, starchy
_____4. Dry, starchy

VEGETABLES

a. Dried beans
b. Cabbage
c. Potatoes
d. Spinach
e. Turnips
f. Rice

5. What is the main concern when cooking:
   a. high-moisture, mild-flavored vegetables?

   b. high-moisture, strong-flavored vegetables?

   c. moist, starchy vegetables?

   d. dry, starchy vegetables?

Place an X in the blank by the phrase which best completes each statement.

6. When cleaning vegetables by soaking, the process can be hastened by using
   _____a. 1 cup sugar in 2 gallons of water.
   _____b. 1 tablespoon of detergent in a 1 gallon of water.
   _____c. 1 tablespoon of salt in 1 gallon of water.

7. Vegetables that have lost their crispness may be restored by:
   _____a. placing them in ice water.
   _____b. soaking them in salt water.
   _____c. refrigerating them for one hour.

For each letter in the question below, underline the correct answer from the pair of phrases in parentheses.

8. When cooking strong-flavored vegetables, you should cook them
   a. (covered, uncovered).
   b. at (high temperature, low temperature).
   c. in (large, small) amounts of water.
   d. for a (short period of time, long period of time).

9. What is the best method for cooking moist, starchy vegetables?

10. What temperature should the water be when adding macaroni products and rice?

11. What needs to be done to potatoes before they are deep-fried?

12. What would be the advantage of using frozen vegetables rather than fresh vegetables?

13. Which would you expect to take longer to cook, a root vegetable such as turnips or a leaf vegetable such as spinach?

14. Baking is not a good technique to use to prepare spinach. What could be done with the spinach so that it could be successfully baked?

15. What can be done to preserve the water-soluble vitamins in vegetables during cooking?

16. What can be added when cooking green vegetables to help retain the green color?

17. What is the result of overcooking white vegetables such as onions and cauliflower?

ASSIGNMENT:

I. List both the methods of preparing vegetables used at your training station and the types of vegetables prepared by each method.

GROUP WORK:

I. Share your list with other students to see the variety of preparation methods and types of vegetables served at various food service establishments.

UNIT X-3

HOT FOOD WORK STATION

SUBJECT: Cereals and Pastas

TASKS:
19. Follow standard procedures for preparing a variety of foods.
20. Evaluate quality of food prepared.

OBJECTIVES: When you finish this lesson, you should be able to
a. list different types of cereals and pastas
b. identify characteristics of standard products.

REFERENCE: Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. Family Meals and Hospitality. New York, New York: Macmillan Publishing Co., Inc., 1972. pp. 204-209.

Many of the foods that you eat every day come from seeds of edible grasses. These seeds are called grains. The most widely used grains are rice, wheat, corn, and oats. Processed grains include flour, meal, breakfast cereal, rice, or pastas.

RICE

Most people think of breakfast when they hear the word "cereal." Rice is a cereal though it is not usually associated with breakfast. Rice is served as an accompaniment for meat, a substitute for potatoes, or an ingredient in a casserole. Rice is also used to make breakfast cereals and desserts.

Rice may be cooked by several methods. The method preferred by your employer should always be used. Two methods for cooking rice are described below.

Method One. Add rice slowly to boiling, salted water. Stir while adding rice. Cover pot until water boils again. Uncover and boil gently until tender. If the grains of rice stick together or to the bottom of the pot, stir gently. When the rice is tender, drain the water through a spigot. Blanch with cold water. When cooled, drain the water off.

Method Two. Wash the rice thoroughly several times to remove excess starch. Add two tablespoons of oil per pound of rice. Add 2 tablespoons of salt and 1-3/4 quarts of water per pound of rice. Cover the kettle tightly and bring the water to a boil. Reduce to low heat and cook slowly. Remove cover the last few minutes to allow steam to escape. This helps separate the grains of rice.

PASTAS

A pasta is a food made from a flour paste, such as noodles, macaroni, and spaghetti. Pastas are used in soups and salads either as accompaniments to main dishes or as the main dishes. When used as the main dish, a pasta is usually supplemented with a protein food, such as meat or cheese.

Pasta products are available in many different shapes. The pasta products are prepared in the same manner as the first method for preparing rice described above. Pastas are cooked to the stage where there is some resistance when the product is chewed and it is not completely tender. This stage is sometimes referred to as "al dente."

QUESTIONS:

1. Name four types of products processed from grains.
   a.
   b.
   c.
   d.

2. What is a pasta?

3. Examples of pastas are
   a.
   b.
   c.

4. Pastas are cooked to a stage referred to as "al dente." What does this mean?

5. Outline the two methods for cooking cereals.
   a.

   b.

6. List qualities of properly cooked cereals.

GROUP WORK:

I. View a filmstrip on the variety of ways macaroni products can be prepared and served. Discuss the examples from the filmstrip and those used at your training station.

II. View a filmstrip showing the use of rice in the diet and information on purchasing, preparing, and serving rice. Discuss the techniques for preparing and serving rice products that differ from those used at your training station.

III. List the types of cereal and pasta dishes and methods of preparation used at your training station. Share your list with other food service students to see the variety of dishes and methods of preparation used at various food service establishments.

UNIT X-4

HOT FOOD WORK STATION

SUBJECT: Soups and Sauces

TASKS:
19. Follow standard procedures for preparing a variety of foods.
20. Evaluate quality of food prepared.

OBJECTIVES: When you finish this lesson, you should be able to
a. describe procedures for preparing soups and sauces
b. identify types of soups
c. identify types of sauces.

REFERENCES: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 127-128.

Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. Family Meals and Hospitality. New York, New York: Macmillan Publishing Co., Inc., 1972. pp. 133-138, 278-283.

QUESTIONS:

1. How is soup stock prepared?

2. Describe how to clarify stock.

3. What can be done to keep a cream soup from curdling?

4. What is the difference between bouillon and consommé?

5. What is the difference between a cream soup and a chowder?

6. What are the qualities of a good soup?
   a.
   b.
   c.
   d.
   e.

7. What is a roux?

8. In what products is a roux used?

9. Describe how to prepare a gravy.

10. What thickening agents are used in fruit sauces?

11. Describe how to prepare a white sauce.

ASSIGNMENT:

1. List and classify the soups and sauces used at your training station.

GROUP WORK:

1. Form small groups to compare the soups and sauces served in various food service establishments. Are these products made from scratch or convenience foods? Are only a few served or is a wide variety offered to the customer?

UNIT X-5

HOT FOOD WORK STATION

SUBJECT: Meats, Poultry, and Seafood

TASKS:
19. Follow standard procedures for preparing a variety of foods.
20. Evaluate quality of food prepared.

OBJECTIVES: When you finish this lesson, you should be able to
a. describe procedures for preparing meats, poultry, and seafood
b. identify characteristics of standard products.

REFERENCES: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 117-122.

Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. Family Meals and Hospitality. New York, New York: Macmillan Publishing Co., 1972. pp. 256-278, 284-304.

QUESTIONS:

1. Define the term marbling as used in reference to meats.

2. Pork may be infected with parasites called trichinae. How can these be destroyed?

3. What does the federal inspection stamp on large wholesale cuts of meat guarantee?

4. List three reasons why meats should be cooked at low to moderate temperatures.
   a.
   b.
   c.

5. Which methods are best for preparing tender cuts of meat?

6. Describe the way to correctly place a meat thermometer in a cut of meat.

7. Why should meats be broiled slowly rather than at a high temperature?

8. Why are moist heat cookery methods used to prepare less tender cuts of meat?

9. What is the difference between the methods of braising and stewing a large cut of meat?

10. Which cooking methods may be used to prepare a broiler chicken that may not be used to prepare a hen?

11. What types of dishes are prepared from the meat of older, tougher poultry?

12. How can one determine when poultry is completely cooked?

13. What is the result of overcooking shellfish?

14. How can one determine when fish is done?

15. Why should the fat used to deep-fry fish not be used to fry other foods?

ASSIGNMENT:

1. Identify the types or forms (fresh, frozen uncooked, frozen precooked, ready to cook, etc.) of meats, poultry, and seafood used in your training stations. List specific examples from the menu of dishes prepared from each type.

GROUP WORK:

1. List the preparation techniques used for meats, poultry, and seafood in your training station. Form groups and discuss the techniques used at the different training stations.

UNIT XI-1

BAKE WORK STATION

SUBJECT: Desserts

TASKS:
19. Follow standard procedures for preparing a variety of foods.
20. Evaluate quality of food prepared.

OBJECTIVES: When you finish this lesson, you should be able to
a. describe procedures for preparing simple desserts
b. identify characteristics of standard products.

A meal without a dessert is like a sentence without a period--unfinished! Foods used for desserts are usually sweet, and the possibilities are unlimited. Cakes, cookies, and pastries are the most common desserts, but other foods are also served for dessert. A dessert should complement the meal it follows. For example, if a light meal is served, a larger, heavier dessert would be suitable.

FRUIT

One of the most colorful, and simplest desserts is fruit. Nothing is more appealing than a bowl of fresh fruit which is in season and reasonably priced. European restaurants often provide cheeses to eat with the fruit.

Melons can be served in chilled wedges or in balls with or without ice cream. Fruits are often combined in fruit cups or compotes prepared from fruits and berries. Sections of citrus fruits can be used in combination with bananas, apples, grapes, or other fruits. Fresh pineapple is very attractive and can be used in a variety of ways. When berries are in season, they can be added to fruit salads or used alone. Ambrosia, a southern dessert, is made simply from sliced oranges and grated coconut.

After cutting, some fruits such as apples and bananas turn dark when exposed to air, due to a tannin reaction. Pouring an acid such as a citrus juice over the cut surface helps prevent darkening.

PUDDINGS AND CUSTARDS

Puddings and custards are frequently used as desserts in food service establishments because they are economical and require little preparation time. A wide variety of desserts can be made from basic pudding and custard recipes.

Starch Puddings. Vanilla and chocolate are the favorite flavors for this dessert. Cornstarch or tapioca is usually used for thickening. Puddings should be light and smooth-textured with no starchy taste. Beaten egg whites may be added to make a fluffy pudding. Care should be taken in cooking to prevent lumping. This can be done by separating the cornstarch or tapioca grains with cold liquid or by mixing the dry starch with the sugar or cocoa ingredients before the milk is added to the mixture. Cook over low direct heat, stirring constantly.

Steamed or Baked Puddings. Both of these puddings are cake-like in appearance. Rice pudding and bread pudding are examples of this type of dessert. They are often served with a dessert sauce, such as a caramel, fruit, or chocolate.

Custards. Generally, custards contain more eggs than puddings. The eggs are used to thicken the mixture. Most custards are baked in the oven or steamed over water on top of the range. Both starch puddings and custards are usually prepared from a purchased mix.

GELATIN DESSERTS

Gelatin is a versatile base for a number of desserts. Plain gelatin can be used and given variety by pouring different colored layers into a dish or glass to achieve a rainbow effect. Whipped cream or whipped toppings may be folded into a gelatin mixture before it has set. Variety can also be attained by the addition of fruits to the gelatin. Spanish creams may be made by partly setting a custard base with gelatin, then folding the custard into beaten egg whites. Bavarian creams are made with a sauce of fruit juice and whipped cream folded into stiffly beaten egg whites, or softened ice cream folded into a whipped commercial gelatin mix.

FROZEN DESSERTS

Ice cream heads the list as one of the most popular types of desserts. Frozen desserts can be used successfully after any type of meal because of a wide range of possibilities from very light to quite heavy. Some examples of frozen desserts are listed below.

1. Ices and Frappés--A sugar syrup flavored with fruit juice. The texture of a frappé differs from an ice which is more solidly frozen.
2. Sherbets--Very similar to ices, but sherbets usually contain milk, gelatin, or beaten egg white, and therefore are firmer and finer in texture than ices.
3. Ice Cream--Cream is one of the main ingredients; thus, ice cream is heavier and has a richer flavor than sherbet.
4. Mousses--Usually made of only sweetened and flavored whipped cream and gelatin. They are quite rich and heavy. Unlike ice cream, mousses are never stirred while being frozen.
5. Parfaits--Similar to mousses in richness or cream content, but parfaits are made by pouring a sugar syrup over either beaten egg yolks or whites; then the whipped cream and flavoring are added. A parfait is also frozen without stirring.

If the food service employee is responsible for the preparation of such frozen desserts as sundaes or banana splits, he should take care to follow the guidelines of the training station.

FRIED DESSERTS

Although very popular, fried desserts such as fritters or fried pies are infrequently found on most menus due to the extensive preparation time required. Most fritters are made of a batter flavored with fruit, then deep-fried. Fried pies are made with a pastry dough which is rolled flat. The desired filling is placed on the dough, the edges are sealed, and the pies are deep-fried.

CREPES

The batter for these very thin dessert pancakes is almost watery in consistency, and no leavening agent is used. Crepes are cooked in a manner similar to pancakes, but the pan is tilted to spread the batter over the bottom of the pan. Before serving, crepes may be filled with a sweet filling, rolled up, and sprinkled with powdered sugar.

With a little imagination and extra planning, a food service operation can leave very pleasant impressions on its patrons by concluding their meals with delicious, attractive desserts.

QUESTIONS:

1. What can be done to prevent the cut surface of apples and bananas from turning dark?

2. List three reasons why puddings and custards are frequently used as desserts in food service establishments.
   a.
   b.
   c.

3. When preparing starch puddings, how can you prevent lumping?
   a.

   b.

4. Describe how to prepare three variations of gelatin desserts.
   a.

   b.

   c.

5. Explain how the batter and cooking procedure for crepes differs from that for pancakes.

6. What are fritters?

7. How does a sherbert differ from an ice or frappé?

ASSIGNMENT:

I. Note examples of various desserts in magazines or those available when you eat in food service establishments. Decide if these are variations of basic desserts or if they require elaborate preparation.

UNIT XI-2

BAKE WORK STATION

SUBJECT: Cakes, Cookies, and Pastries

TASKS:
19. Follow standard procedures for preparing a variety of foods.
20. Evaluate quality of food prepared.

OBJECTIVES: When you finish this lesson, you should be able to
- a. describe procedures for preparing cakes, cookies, and pastries
- b. identify characteristics of standard products.

REFERENCE: Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. *Family Meals and Hospitality*. New York, New York: Macmillan Publishing Co., Inc., 1972. pp. 321-351.

QUESTIONS:

1. Cakes containing fat are often called ____________________ cakes.

2. Cakes containing no fat are referred to as __________ or __________ cakes.

3. a. Describe the differences in the conventional method and quick method for mixing a butter cake.

   b. Is it possible to use either method for a particular butter cake recipe? Why?

4. a. What is the result of using a smaller size cake pan than called for in a recipe?

   b. A larger size pan than called for?

5. A cake pan used for an angel food cake should be prepared by lightly greasing and flouring before using.
   _____a. True
   _____b. False

6. List a disadvantage of preparing a cake using the muffin method.

7. List the characteristics of a good butter cake.
   a.
   b.
   c.
   d.
   e.

8. How does cookie dough differ from cake batter?

9. Place an X beside the types of cookies that can be easily and quickly prepared in quantity food production.
_____a. Drop cookies
_____b. Pressed cookies
_____c. Rolled cookies
_____d. Bar cookies
_____e. Refrigerator cookies

10. You are asked to explain the correct way to frost a cake. List five points you would be sure to mention in your explanation.
a.
b.
c.
d.
e.

11. The type of flour most frequently used for pie dough is ________________.

12. What is the best temperature for mixing shortening into flour for pie doughs made by the conventional method?

13. Describe procedures for obtaining a flaky, tender, light pie crust.

14. Describe the texture of pie crust made by the hot water method.

15. What ingredients are included in a crumb crust?

16. Give the baking temperature and time for
________________a. Single crust pies
________________b. Fruit pies
________________c. Crumb crust

17. Jan's supervisor said the pie crust she made was of high quality. Describe the appearance of a quality pie crust.
a.
b.
c.
d.
e.

18. In double crust pies there is a tendency for the filling to bubble while cooking and to spill into the oven. How can this be prevented?

19. In many food service operations, single crust cream pies are not filled until just before use. Explain why this is done.

20. Name four toppings for pies.
    a.
    b.
    c.
    d.

21. If special tartlet tins are not available, what may be used to make individual shells?

ASSIGNMENT:

I. Compare the methods for making cakes, cookies, and pies at your training station with the procedures described in references. Check to see if you can improve the way you prepare these products.

GROUP WORK:

I. View filmstrips on the commercial preparation of cakes, cookies, and pies. Discuss and compile a list of the similarities and differences of techniques shown in the filmstrip and those used at your training station. Turn this list in to your teacher.

II. In small groups, prepare posters illustrating the accepted standards for cakes, cookies, and pies. Display the posters on a bulletin board.

UNIT XI-3

BAKE WORK STATION

SUBJECT: Breads

TASKS:
19. Follow standard procedures for preparing a variety of foods.
20. Evaluate quality of food prepared.

OBJECTIVES: When you finish this lesson, you should be able to
- a. explain functions of basic ingredients in baked products
- b. describe procedures for preparing quick bread and yeast bread products
- c. identify the characteristics of standard yeast bread and quick bread products.

REFERENCE: Lewis, Dora S.; Peckham, Gladys C.; Hovey, Helen S. *Family Meals and Hospitality*. New York, New York: Macmillan Publishing Co., Inc., 1972. pp. 169-177, 312-320.

Have you ever wondered what is involved in creating delicious baked foods? Often a food service operation is remembered for the type and quality of its hot breads, cakes, or pastries.

Most baked products are made with basically the same ingredients. Before studying specific products, you should have an understanding of the basic ingredients and how each contributes to the quality of the finished product. Variations result from slight changes in ingredients and from different methods of preparation.

Carefully follow each recipe when preparing bakery products. Measure ingredients as directed. Follow mixing procedures exactly. Recipes are often similar, but slight variations may be the secret to achieving the desired results.

QUICK BREADS

In mixing quick breads, mix the ingredients quickly, only enough to blend. Too much stirring toughens the bread and creates a coarse texture. If the recipe directs you to add wet and dry ingredients alternately, stir after each addition. When alternating wet and dry ingredients, add dry ingredients first and last to prevent curdling the batter.

The characteristics for well-prepared quick breads are listed below.

PRODUCT	OUTSIDE CHARACTERISTICS	INSIDE CHARACTERISTICS
Rolled Biscuits	Shape--even, straight sides and level tops Size--uniform; double the size of unbaked biscuits Color--evenly browned tops and bottoms with lighter sides; no yellow or brown spots Crust--tender, fairly smooth, free from excess flour	Color--creamy white; no yellow or brown spots Grain--flaky, pulls apart in layers Texture--tender, slightly moist, light Flavor--good flavor
Plain Muffins and Bread	Shape--symmetrical, rounded tops Size--uniform and large in relation to weight Color--golden brown Crust--tender, pebbly, surface; shiny	Color--depends on kind of flour used, no streaks Grain--coarse, even cells; no tunnels Texture--tender, slightly moist, light Flavor--mild flavored, slightly sweet.
Cornmeal Muffins and Corn Bread	Shape--no peaks; medium rim; slightly rounded top as for muffins. Size--all uniform Color--golden brown Crust--slightly cracked, somewhat rough	Color--yellow or white, without large pieces of cornmeal Grain--round, even, slightly open cells Texture--crisp, tender, slightly moist Flavor--pleasing, corn-like
Pancakes	Shape--even and round Size--uniform Color--evenly brown on both sides Crust--delicately pitted surface	Color--even throughout Grain--fine, even cells with no tunnels Texture--light, porous, not sticky Flavor--well-blended, pleasing
Waffles	Shape--regular and in the shape of the waffle iron grids used Size--uniform Color--even, golden brown Crust--crisp	Color--even throughout Grain--fine, thin-walled, evenly distributed Texture--light, tender, slightly moist Flavor--mild, pleasing

PRODUCT	OUTSIDE CHARACTERISTICS	INSIDE CHARACTERISTICS
Popovers	Shape--well-popped Size--large in relation to weight Color--golden brown Crust--thick, crusty wall, tender and crisp	Texture--hollow interior, slightly moist Flavor--pleasing

YEAST BREADS

The most familiar bread products are yeast breads, such as loaf breads, rolls, cinnamon rolls, and coffee cakes. The basic ingredients in yeast breads are flour, liquid, fat, sugar, and yeast. (The leavening action in yeast breads is a fairly slow process which uses the carbon dioxide gas produced by the yeast as it feeds on starches or sugars to raise the baked product.)

The three most common methods for preparing yeast breads are listed below.

1. Straight-Dough Method--The ingredients are combined, kneaded, and allowed to rise. After rising, the dough is punched down, portioned, and allowed to rest. The dough is then shaped, panned, proofed, and baked.
2. Sponge Method--Yeast is combined with part of the liquid, flour, and sugar. The mixture is covered and set in a warm place until it becomes light and bubbly or spongy. Then the fat, additional flour, sugar, and salt are added to the sponge to make a stiff dough. After this step, the procedure is the same as for the straight-dough method.
3. Batter or No-Knead Method--As the name implies, the kneading and shaping steps are omitted. Mixing is faster because bread is made from a batter rather than a dough. The texture of products made by this method is not as fine and uniform as bread from a kneaded dough. Products made by the no-knead method have a higher moisture content. This method is frequently used in the preparation of dinner rolls.

The basic steps in making yeast bread are as follows:

1. Mixing--Ingredients are combined according to the order listed in the recipe.
2. Kneading--The ball of dough is worked with the hands to develop the gluten in the dough. The dough is kneaded for 5 to 8 minutes or until it becomes smooth and satiny in appearance.
3. Fermenting--The dough is placed in a warm, moist place to allow the yeast to produce carbon dioxide gas to leaven the product.
4. Punching--When dough has risen sufficiently, it is tested by inserting two fingers into the mixture. If holes close very slowly, dough is ready for punching. Using the fist, pound the center of mixture and fold the outer edges into the center. Punch for 2 to 4 minutes; then turn inside out. This process better distributes the yeast and aids in the development of gluten.

5. Scaling--Dough is weighed into equal portions.
6. Rounding--Weighed portions are made into balls.
7. Resting--Dough rests for approximately 10 minutes to relax the gluten and make it easier to handle.
8. Molding--Dough is formed into desired shape (rolls, loaves, cinnamon rolls, etc.).
9. Panning--Dough is placed in a greased pan (seam side down in the case of loaves).
10. Proofing--Pans are placed in a proof box which is warm and humid. Dough is allowed to double in size. When fully proofed, dough slowly fills out small dents made by the fingers and is ready to be baked.

YEAST BREAD EVALUATION

PRODUCT	OUTSIDE CHARACTERISTICS	INSIDE CHARACTERISTICS
Yeast breads	Shape--rounded top, symmetrical Size--good volume for weight Color--even, golden brown, not spotted Crust--tender and crisp without cracks, uniform moderate thickness	Color--even, without streaks or spots Grain--evenly distributed with fine, not coarse, cells Texture--soft, moist, springy Flavor--good flavor without excessive yeasty taste, typical of type of flour used

QUESTIONS:

1. What is the difference between a quick bread and a yeast bread?

2. Describe the consistency of the three mixtures from which quick breads are made and give an example of a product made from each mixture.
   a.

   b.

   c.

3. What ingredients are added to flour to make a self-rising flour?

4. How is gluten formed? What is its function in a baked product?

5. Define a leavening agent.

6. List four leavening agents used in quick breads.
a.
b.
c.
d.

7. Explain how steam acts as a leavening agent in quick bread products.

In Questions 8 and 9 place an X in the blank beside the correct answer(s) for each question.

8. Which of these methods incorporate air in a product?
_____a. Beating egg whites
_____b. Sifting sugar
_____c. Beating a batter or dough
_____d. Creaming shortening

9. Which of the following ingredients provide tenderness in a baked product?
_____a. Fat
_____b. Salt
_____c. Sugar
_____d. Starch

10. What is the effect of overmixing a quick bread product?

11. When the recipe for a quick bread product directs you to "add wet and dry ingredients alternately," what is one important point to remember?

12. Why must all-purpose or general-purpose flour be used in yeast products?

13. How does yeast leaven a yeast bread product?

14. Rearrange these steps by numbering them in the order they would be used for making yeast bread by the straight-dough method.

_____Baking
_____Punching
_____Molding
_____Kneading
_____Scaling and Rounding
_____Mixing
_____Panning
_____Fermenting
_____Resting
_____Proofing

15. a. What ingredient furnishes food for the growth of the yeast?

b. List two other contributions of this ingredient to the quality of the product.

16. Why is yeast dough kneaded?

17. Why is yeast dough "punched"?

18. How can one determine when a dough is fully proofed?

19. Which of the following are desirable characteristics of the external color and crust of yeast bread?

_____a. Tender and crisp
_____b. Dark brown
_____c. Moderate thickness
_____d. Even color, not spotted
_____e. A ragged, open break

20. Describe the internal appearance of a yeast bread product.

ASSIGNMENT:

I. If more than one method is used to prepare yeast bread products at your training station, compare and contrast the quality of products made by the straight-dough method with similar products made by another method using the characteristics listed in the Yeast Bread Evaluation.

GROUP WORK:

I. Form small groups to share and discuss the different types of yeast bread and quick bread products and the preparation methods (made at the training station or pre-prepared convenience products) used in your training stations.

II. View and then discuss a film on the process of making bread, from the harvesting of the grain to the baking of a bread product.

UNIT XII-1

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Preparing the Table

TASKS:
21. Serve food in manner prescribed at place of employment.
22. Set assigned tables at the beginning of the work day and maintain tables during service hours.
23. Help arrange tables for large groups and special parties.

OBJECTIVES: When you finish this lesson, you should be able to
a. recognize various types of table service
b. illustrate correct table settings for specific types of service
c. list factors which determine room arrangements
d. describe possible table arrangements for parties.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 244-247, 237-239, 253-256.

TYPES OF SERVICE

The skill needed by a waiter or waitress is largely dependent upon the type of service used in the food service establishment. The major types of service are American, French, Russian, English, and buffet. A combination of these may be used by a certain restaurant to suit its type of operation. The waiter or waitress should be able to recognize the appropriate set-up, equipment, and serving procedures generally used for each type.

SETTING THE TABLE

If one of your responsibilities is to set tables, observe the policies of the establishment where you are employed. Some general rules for setting and serving tables are:

1. Assemble all the equipment needed before beginning.
2. Place a piece of felt or foam rubber, called a "silence" cloth, on the table if these are used in the food establishment where you are employed. Many tables have a cushioned top, making silence cloths unnecessary.
3. Cover the table with a clean tablecloth. The cloth should extend at least 12 inches over the edge of the table. Sometimes another tablecloth, called a top cloth, is placed over the first tablecloth and is removed each time a meal is served.
4. Place an ash tray, sugar bowl, salt and pepper shakers, and other condiments as needed on each table. Additional ash trays may be needed if the table is occupied by more than two persons.
5. Place "covers" on the table before the customers arrive or immediately after the customers have been seated. A cover is the space set with flatware, dinnerware, glassware, and linens for one person.

Place silverware in the order it is used--from the outside to the inside of the cover. Some clues to remember about placing items on the table are listed below.

1. The folded napkin may be placed in the center of the cover, to the left side of the cover, or in the water glass.
2. Forks are placed to the left of the cover, except for oyster and cocktail forks. In settings requiring no knife, the fork may be placed to the left of the spoon.
3. The bread-and-butter plate is placed above the fork.
4. The salad plate is placed to the left of the forks or over the tip of the forks.
5. The knives and teaspoons are placed to the right of the cover about 9 inches from the forks so that a plate can be placed between them.
6. The water glass is placed to the right of the tip of the dinner knife.
7. The coffee cup is placed to the right of the spoons or over the tip of the spoons.
8. If a course is served by itself, you may bring the necessary silverware with the course. For example, you might bring an additional spoon with ice cream.
9. Beverages are placed on the right half of the cover, side dishes and bread and butter plates on the left half.
10. Flatware should be placed an even distance from the edge of the table. The distance may vary from 1 inch to 1 1/4 inches in different establishments. The rim of the dinner plate should be even with the bottom of the flatware.
11. The tines (points) of the forks and bowls of the spoons are up, and the blades of the knives face the plate.

ARRANGING TABLES FOR PARTIES

Arranging tables for parties involves consideration of several factors:

1. The type of function: banquet, dinner dance, buffet, or reception.
2. The number of guests.
3. The type of service to be used: formal or informal.
4. The amount of equipment and number of waiters or waitresses needed. (This affects how much space is necessary for service.)
5. The shape of the room and any obstructions in it, such as posts or pillars.
6. Whether a head table is to be used and, if so, how many guests are to be seated there.

Most rooms lend themselves best to a limited number of arrangements. As a rule, there are certain ways of setting up tables in any room in an establishment which have been proven to work best. You may be asked to assist in the preparation of a room for a special event.

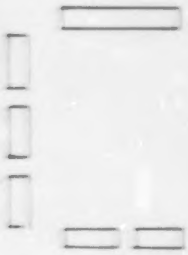
In large establishments, such as a hotel, there may be large numbers of people involved in the planning and preparation of events. When several hundred guests are expected, this is especially true. The department or person in charge of the event should furnish you with the following information and may include diagrams of the room arrangement needed.

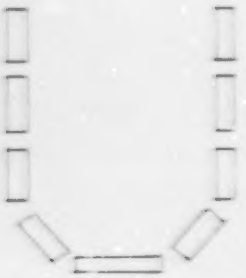
In order to set up the room, you must know the following:

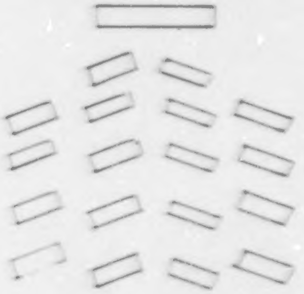
1. Number of guests.
2. Seating arrangements.
3. Space and amount of flatware needed for each cover.
4. Type of linen, flatware, and glassware.
5. Decorations: candles, place cards, flowers, etc.
6. Music: live or recorded, space, and equipment needed.
7. Guest speaker: lectern, dais or raised platform.
8. Microphone and loud speaker arrangements.
9. Menu being served and special serving equipment needed.

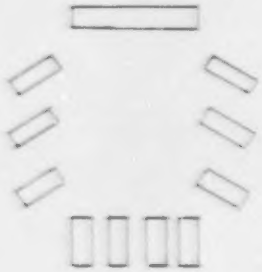
Some points to remember when setting up a room for a special event include the following. The seating arrangement should be well-planned and never overcrowded. The long banquet table should not be used if at all possible. Tables for six or eight are easier to serve and are more pleasant for the guests. No guest should be seated with his back to the head table.

Some possible table arrangements using long tables are L-shapes, U-shapes, herringbone, and hollow squares. Some of these are shown in the following illustrations.

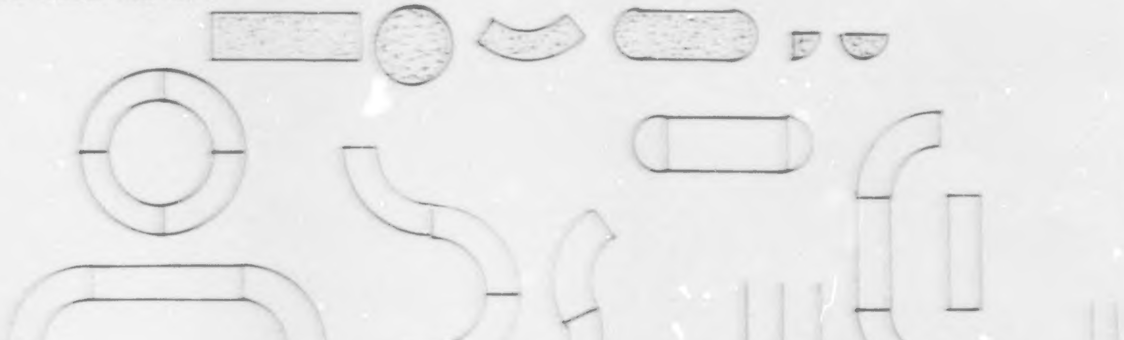








It is often possible to use either folding tables with a variety of different shaped tops or sectional tables to create such different table shapes as oblong, round, serpentine, oval, quarter-round, and half-round. Some examples are shown below.



In order for any function to go smoothly, it is necessary that everyone perform his task efficiently and correctly. The failure of one employee to carry out each of his duties exactly as they are outlined can spell disaster for the event. If the speaker prepares to begin his speech and there is no microphone, it will mean a lengthy delay while one is set up. No doubt, this would be the last time this group would come to this establishment for such a meeting. No establishment can afford the loss of good will among its customers.

QUESTIONS:

1. If an employer said he used American service,

   a. where would the food be placed on the plate?

   b. what are the advantages of this type of service?

   c. from which side of the guest is food served?

   d. from which side of the guest are beverages served?

2. How does French service differ from other services?

3. Describe the serving of food in Russian service.

4. In terms of table settings, what does cover mean?

5. Would these items be placed on the right or left of a cover for a dinner table setting?

   ______________ a. Dinner knife
   ______________ b. Salad fork
   ______________ c. Teaspoon
   ______________ d. Salad plate
   ______________ e. Water glass
   ______________ f. Soup spoon
   ______________ g. Napkin
   ______________ h. Coffee cup and saucer

6. List four factors that help to determine the arrangement of tables in a dining room for a special event.

7. Draw and describe two possible arrangements of tables for a special event.

ASSIGNMENTS:

I. Identify and describe the type of table service used at your training station.

II. Using a drawing, show a correctly set cover for your particular training station.

III. List the steps you now use to set up tables at your training station. Describe how you could improve the procedures to save time and energy.

IV. Make a diagram of one or two possible table arrangements for parties for your training station, taking into consideration the equipment available, shape of the room, and type of service used at your training station.

GROUP WORK:

I. Compare the type of table service and table setting used at various food service businesses. Use the drawings made in the individual assignments or use equipment in the lab to set a cover like the one used at your training station.

II. Form small groups and demonstrate the various types of table service to other food service employees. Have one person describe to the class special points of each type during the presentation.

III. View and discuss a filmstrip on correct and incorrect procedures for counter service.

IV. Role play mistakes commonly made in counter service. Show how to perform each procedure correctly. Some situations to include might be setting a cover, serving beverages, serving food, clearing dishes before serving dessert, and presenting the check.

V. Form small groups to compare and discuss room arrangements for special parties, using the diagrams you made in the individual assignments. Point out the different types of service used, equipment available, and physical properties of the rooms that would determine the arrangements possible at the various food service establishments.

UNIT XII-2

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Meeting the Public

TASK: 24. Welcome customers in an appropriate manner.

OBJECTIVES: When you finish this lesson, you should be able to

a. cite characteristics necessary for success as a service host or hostess
b. evaluate personal appearance
c. analyze yourself in terms of ability to get along with the public
d. use proper procedure for seating guests.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 286, 231 (pictures).

Front-of-the-house employees are always visible to the customers. They provide the image of the restaurant that the customer remembers best. Customers usually forgive mistakes made in service if your attitude is good. Customers seldom forget the impression left by an employee's attitude or appearance.

1. Look sharp! You must be extremely careful about the appearance of your clothing, face, hair, hands, and posture. When you look good it makes you feel good. You must feel good yourself in order to help your customers feel that way.

   Females, be careful about using too much make-up or the wrong kind. Use make-up lightly in the right places. Males, shave as often as needed to look clean-shaven. Avoid wearing perfume, cologne, or after-shave lotion as some customers are allergic to it.

   Short hair styles present a neater appearance and are more sanitary than long ones. Long hair must be put up, covered with a net or cap, or tied back out of the way. Hair spray helps keep your hair out of the food as well. No one wants his food garnished with your hair!

   The appearance of an employee's hands is very important. Nails should be well-groomed and extremely clean! Chipped or broken nails are unsightly and look unsanitary. Long fingernails with dark polish are unattractive in food service. If polish is worn, it should be clear or have a very light tint.

2. Smell fresh. Bathing daily and using a good deodorant or anti-perspirant is a must! Some persons perspire heavily. Females can prevent soaking their garments by wearing under-arm shields. Males can wear undershirts or T-shirts.

One of your most important assets is your smile. Your teeth must be clean, bright, and well cared for. Your breath must be fresh. Brush your teeth regularly and, if you smoke or eat strong foods, use a breath freshener to eliminate odor.

3. Stand straight. Your posture is as important for your health as it is for your appearance. Successful, skilled people usually look that way. Remember how important you are to the management, the customers, and the back-of-the-house.

4. Avoid unnecessary jewelry. An engagement or wedding ring and a watch is all that is needed as a rule. Dangling or noisy jewely is detracting and may be dangerous. A dangling bracelet or necklace can easily tip over a glass, catch on food dishes, or get hung in equipment.

   If you are careless about your grooming or personal cleanliness, guests will wonder how careful you are with their food. Would you want to be served a meal by someone who has an offensive odor, dirty nails, or dirty clothing? Heavy make-up, no matter how freshly applied, appears unclean. That clean, fresh, well-scrubbed look will pay for itself in tips.

Let's take a look now at how you act. You should be:

1. Friendly, and courteous, but not familiar. "Yes, Sir" and "Yes, Ma'am" are always acceptable. "Honey," "Sweetheart," and "Sugar" are not.

2. Helpful, but not overbearing. A phrase like "Our apple pie is a speciality of the house" is helpful. A phrase like "You can't leave without eating our apple pie" is overbearing.

3. Professional in every way. Control your temper, watch your tongue, and know the policies of the establishment. Learn how to handle unpleasant or embarrassing situations with tact. If these occur often, take a good look in the mirror at your appearance and review your behavior. It could be that you are inviting the wrong kind of attention.

4. Gracious in your welcome. Don't leave the impression by your actions or words that you are too busy, too tired, too unhappy, or too lazy to attend to the customer's needs. If you stand erect, smile often, and work efficiently, your tips will show the appreciation of your customers.

5. Observant. Does one of your customers need additional coffee? Has he finished his meal? Does he want dessert? Is he waiting for the check? Pay attention to each customer's needs.

6. Tolerant of the behavior of others. Try not to take the behavior of a guest personally. If he is rude, demanding, grouchy, or unpleasant in any way, keep cool and calm (at least on the surface). Do everything you can to correct the situation. If a guest becomes unruly, report it to the head waiter or waitress or manager at once. The unruly guest is more likely to take suggestions from someone in authority.

7. Ready to work when you arrive. Leave your troubles at home. Don't let personal problems show to customers. This indicates a lack of emotional maturity. They want to eat surrounded by pleasant people in a pleasant atmosphere. If your are too sick to work, stay at home for the sake of your customers and your own health. Never forget to call the proper person early so that a replacement for you can be found.

8. Impartial. Treat all your customers equally. You may feel that you are being friendly by visiting with a customer or group. Others may not see it that way, however. They may feel that their service is being delayed or that they are being neglected, and they may be right. Remember, the customer is the most important person in any food service operation. Lost customers mean lost income for you as well as for your employer.

9. Self-confident. You know what you can do and you do it. Laugh at your own mistakes, but not those of others. We all make mistakes and unless they hurt someone, they are often amusing. You are able to take criticism. (Nobody is perfect, so learn to "take" corrections your boss points out to you and benefit from them.) You are enthusiastic and energetic. Hop in there and do your work without the need for constant supervision. No one has time to watch you and tell you what needs to be done next every minute of the day. You are resourceful. Find a way to get the job done even under pressure. Finish what you start.

Seating Guests

You have greeted your customers at the door with a smile. Now where should you seat them? Here are some hints:

1. Every customer in the restaurant has an equal right to dine comfortably. If a group or an individual appears to be the noisy disruptive type, seat them well away from quiet-loving types.

2. Keep safety in mind. If a family has a small child who requires a high chair, seat them where the chair does not interfere with safe passage in the aisle and around the table.

3. Take special precautions with the handicapped. If a guest is blind, offer your arm to guide the guest to a convenient location. Do not walk behind the guest to guide him. He might trip or fall over furniture. Move to one side anything on the table that the guest might accidentally knock over. Be careful not to make an issue of anyone's handicap to avoid disturbing other customers. A guest in a wheelchair needs to be placed in an area where the chair does not obstruct traffic.

4. At most restaurants, guests are not seated according to their social position or importance. Keep this in mind.

5. Is there a question in your mind as to whether a guest should be allowed to dine in the restaurant? Leave it up to the manager. A scene with an intoxicated person is highly undesirable.

When you have decided on an appropriate table for a particular group, ask the group to follow you to the table. Seat women guests so they face the dining room instead of the wall. After they are seated, hand them menus. While serving a couple, present the menu to the lady first. When serving a group, present the menus beginning with the person on the right of the host and proceeding counterclockwise around the table.

QUESTIONS:

1. List some personal characteristics necessary for success as a service host or hostess.

2. Why must persons who prepare and serve food to customers maintain high standards of personal cleanliness.

3. Identify six practices a person should follow to maintain high standards of personal cleanliness.
   a.
   b.
   c.
   d.
   e.
   f.

4. Outline the procedure for seating customers.

5. Describe how to seat a guest who is blind.

ASSIGNMENTS:

I. Describe the procedure used at your training station to seat guests.

II. Using the employee handbook from your training station make a check list for yourself on personal appearance. If you do not have a handbook, ask your training sponsor to give you guidelines for your personal appearance and hygiene. Use the check list daily; then make a weekly report on how well you are following the guidelines. Turn this report in to your teacher.

GROUP WORK:

I. Make posters to help other students become aware of good grooming requirements for food service workers.

II. Role play situations involving "getting along with the public." Show a poor way; then follow with an improved way. Check the nine guidelines outlined in the unit for ideas to role play.

UNIT XII-3

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Writing and Placing Orders

TASKS:
25. Fill water glasses and distribute menus.
26. Offer suggestions or answer questions about the menu.
27. Write orders following prescribed methods.
28. Place orders in kitchen.
29. Prepare menu folders.

OBJECTIVES: When you finish this lesson, you should be able to
[illegible] describe procedure for writing orders
b. identify items commonly used on menus
c. demonstrate courteous and efficient use of the telephone.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 230-234, 160-183.

The manner in which you greet a customer as you present the menu is your first important contact with him.

Welcome the customer with a smile and be courteous, regardless of the customer's attitude. Place the menu before him and fill his glass with ice water. Give him ample time to make his selection, answering questions courteously and making suggestions if asked.

TYPES OF CUSTOMERS

There are any number of types of customers, but the following are typical.

a. In a Hurry--If service can be given more quickly in another part of the restaurant (at a counter, for example), ask the customer if he would like to move there. If not, explain as accurately as you can how long his order will take.

B. Demanding--Stay cool and calm. Answer questions with care. Do not agree to give more, better, or faster service to him than to the other guests.

C. Complainer--The item he came in for is not on the menu. Say, "I'm sorry that you have been disappointed, may I suggest something else?" The soup and coffee are cold, the gelatin and ice cream are melted. Exchange food without a fuss unless you have instructions to do otherwise. Do not appear annoyed, upset, or in a hurry. Listen carefully. Report any complaints you cannot handle to the manager or other designated person.

D. Uncertain or Shy--Make suggestions and do not rush him. If the customer takes too long, excuse yourself and promise to return soon. Do not appear irritated or make the customer feel guilty about delaying you.

E. Joker or Over-Familiar Guest--Be courteous, but dignified with this undignified individual. Avoid long conversations and try to be good-natured about "kidding." Avoid going near the table except to provide needed services. If this individual gets "out of line" report it to the manager. Avoid making a scene.

F. Children in High Chairs--May be your most delightful guests or your biggest problem. A few tips on how to prevent an unpleasant situation are:

a. Do not ask a small child what he wants to order unless the parents request you to do so.
b. Move carefully out of reach things a child might grab; but do not be obvious about it.
c. Provide the child with a small glass that he can handle. A small plate with crackers on it will keep him happy while his parents order. Do not fill glasses full and avoid tall serving dishes, such as a sundae dish.
d. Be friendly, but do not play with or tease him. This can cause him to become too excited to eat.
e. If possible, place a child so he cannot see other guests. This arrangement will help prevent distractions.
f. Provide extra napkins during the meal and a warm, wet cloth at the end of the meal. Parents greatly appreciate such courtesies.

G. Blind Customers--may or may not need your assistance in ordering. Some blind persons can see well enough to read menus. Ask the customer if he wishes a menu. If not, he will probably express some food preferences which can help you make suggestions. Unless he makes a comment telling you he doesn't need or wish to know the price, you should give the price of each item when it is mentioned. For example: "We have a 10 oz. sirloin for $4.95." Blind customers are not usually hard of hearing. Often their hearing is better than average. Keep your voice at a normal, pleasant level.

Your ability to serve each of these customers courteously and effectively will show up in your tips. Remember, it's to your advantage to be professional.

TAKING ORDERS

When to take the order

When to take a customer's order, partly depends upon the time of day and the type of restaurant in which you are working. The rest depends upon the customer and whether he is in a hurry. Breakfast customers are usually in a hurry and want to place orders immediately. Luncheon customers may or may not be in a rush. Those on one-hour lunch breaks are in a hurry. Businessmen attending meetings and those on shopping trips probably are not.

Dinner guests are usually ready to relax and take their time. If not, they will probably say so.

With experience, you'll discover how long your usual customer wants to wait before having his order taken.

A customer is ready to place his order when he puts the menu down or when he gives a signal. Be ready! If there is a host in the party, he may wish to order for his guests, or he may want each guest to order for himself. If he wants each guest to order for himself, start with the person to the right of the host.

Smile as you stand on the guest's left side (when possible). Stand erect and at a reasonable distance from the table. Slowly and silently count to seven. If the customer has decided what he wants, he will begin giving you his order. If not, he may wish your assistance. If he gives you a complete order (meat, potatoes, vegetable, salad and dressing, beverage, and appetizer) the list is complete. If the appetizer is left out, suggest one. He will usually order it.

Read the guest's order back to him after he gives each item. For example:

Guest: "I'll have the prime rib."
You: "Prime rib....what degree of doneness do you prefer?"
Guest: "Medium rare--and I'll have a baked potato with butter and green beans, tossed salad with Roquefort dressing and coffee."
You: "Baked potato with butter, green beans, tossed salad, Roquefort dressing, and coffee. Do you want cream with your coffee?"
Guest: "No, thank you."
You: "We have a delicious, fresh 'Gulf Coast Shrimp Cocktail' which is served with our special shrimp sauce. Would you care for some?"
Guest: "Yes, I believe I would."
You: "Would you like your coffee now or with your meal?"
Guest: "Now, please."
You: "Thank you for your order, sir. I'll get your coffee right away."

If a guest does not give you an order or only orders a meat, use the following procedure:

1. Suggest two items in each food category. (This gives an adequate choice that is not confusing.)
2. Don't forget to suggest an appetizer. Your tip is based on a percentage of the total check. If you sell a $1.25 shrimp cocktail the tip could be increased by $ .25. Is it worth a quarter to ask a simple question? Multiply that quarter by ten customers and see what your answer is.
3. Look at your customer, smile, and thank him for his order.

To provide the best possible service, be systematic. Mentally number the chairs at a table to correspond with the order. This system enables you to deliver the right order to each customer. It also prevents such questions as "Who has the stewed tomato?"

List foods in the order that they are to be served. Begin with the appetizers and soups, then list the entrees, and write the desserts and beverages last. Repeat the written order to customers to make sure that it is correct and to give the customer an opportunity to make changes or additions.

Understanding the Menu--Suggestive Selling

It is important for a waiter or waitress to have a good command of the English language. This does not mean that you try to impress customers with your use of "big" words. It means that you use words properly. If your grammer is poor, it will pay you big dividends now and in the future to improve it. Saying something like, "It don't make me no difference," will ruin your chances to work in an expensive restaurant or to move up from your current position. The use of slang words or expressions popular among your friends or use of profanity can also irritate your customers and could cost your job. You are often the only image a customer has of the food service establishment, so make your image a good one.

The use of descriptive terms helps increase a customer's appetite, the size of the check, and your tip. Suggestive selling also helps. Suggestive selling means inviting guests to add a food which will increase their dining pleasure to an already satisfactory meal.

Examples of descriptive terms include: "piping hot," "new," "green," "cold," "plump," "fresh," "chilled," "iced," "crisp," "young," "tender," "bright-red."

Think of some other descriptive terms you might use.

Suggestive selling might be used like this:

"We have a fresh fruit salad of chilled melon balls and plump red strawberries which is served with our special house poppy-seed dressing. It would go nicely with your selection of 'Chicken Mornay'."

"We have a special treat for dessert today--a refreshing piece of our delicious lemon pie. Would you care for a serving?"

Some phrases which can be helpful include:

1. "I just served it at another table and it looks delicious."
2. "This has always been one of our most popular dishes."
3. "Lots of people have ordered it and enjoyed it."
4. "Our regular guests order it and say it's one of the best things the chef makes."
5. "I had this for lunch and thought is was delicious."

Above all, be honest and sincere. If you are not, it shows. The old adage "If you can't say something nice, don't say anything at all" certainly applies here. Find a dish you can say something nice about or find another job.

To be able to make menu suggestions to customers, you must understand the terms on a menu. Take time to become familiar with menu arrangements and the meaning of terms used on menus.

The waiter or waitress is responsible for the timing of the meal. After taking the guest's order, the waiter or waitress must decide whether to place the order in the kitchen immediately or to hold it for a short time. If the guests are having cocktails and hors d'ourves before dinner, the order should be held for a short time. Be careful that you do not forget to turn the order in to the kitchen.

In a single-unit kitchen, the chef is responsible for having the entire order ready at the same time. In a multi-unit kitchen, the waiter or waitress co-ordinates the meal. The order may have some entrees that take longer to prepare than others. You must submit these orders in separate stages so that they are all ready at the same time. For instance, a broiled meat takes longer to prepare than a stew which is probably ready immediately.

In many food service businesses, the order is written on a guest check which is attached to a rotating wheel or spindle in the kitchen. In larger kitchens, parts of the order must be rewritten on separate sheets and submitted to various food preparation units of the kitchen.

To insure that guests are served food that is the correct temperature, be sure that you pick up the orders as soon as they are ready. No one enjoys eating a cold steak or a lukewarm salad.

TAKING TELEPHONE ORDERS

Many restaurants, especially those which offer fast-food service, do much of their business by telephone. Other restaurants may not do telephone business or may take reservations only.

Whenever the phone rings and you pick it up, you have a potential customer on the line. Your telephone manners help to determine whether this person decides to become a customer.

These hints may aid you in winning and keeping that caller for a customer.

1. Answer promptly with a pleasant tone of voice.
2. Identify yourself. For example: "Good afternoon, McGorne's Restaurant, Sandy speaking. May I help You?" Another phrase that is often used is "Thank you for calling McGorne's Restaurant. This is Sandy. May I help you?"
3. Keep a pad and pencil handy.
4. Place the receiver carefully on a padded surface if you must leave the phone.
5. Ask "May I tell him who's calling, please?" Do not say "Who's calling," or "Who is this?"
6. If you must leave the line, explain why. If the delay will be over one minute, offer the option of "holding" or having the call returned.
7. Repeat the information received back to the caller. Be sure you have names correctly spelled. This gives the caller an opportunity to correct any errors or misunderstandings.
8. Do not hold your hand over the receiver thinking that you will not be heard. Both ends of the receiver pick up sound.
9. Do not yell across a room to say someone has a call. Say "Just a moment, sir. I'll get her for you." Then walk over and tell the person in a quiet voice that she is wanted on the phone.
10. If the person being called is not in or is unavailable, offer to take a message or have the call returned.
11. Avoid making or receivng personal phone calls. The telephone is for business purposes and should be reserved for those calls only.
12. End each call courteously with "Good-bye. Thank you for calling McGoren's Restaurant," or some other appropriate statement.

Businesses are all aware of the importance of their telephone images. Many of them have standard forms of greetings and closing statements for their employees to use. Keep in mind that this caller might be your employer or one of his best friends. Answer every call as if it is one of these persons.

PREPARING MENU FOLDERS

If you work in a small restaurant, your duties may include typing the daily menu. The daily menu specials are often on a mimeographed sheet which is attached to the regular menu.

When typing the menu, be sure it is centered on the page. The headings should be clear. Include an accurate description of the menu items. It is especially important that there are no typographical errors. The wrong price typed on the menu can cause the business to lose money or create a poor impression with the customers.

QUESTIONS:

1. How do you know when the guest is ready to order?

2. How should the waiter or waitress stand when taking an order?

3. The waiter should take the order from the customer's left.
   _____a. True
   _____b. False

4. Jane has trouble remembering which foods each customer has ordered when she serves the plates. What suggestion could you give her?

5. The customer ordered a steak dinner which includes a choice of baked, French fried, or mashed potatoes; a green salad; and choice of beverage. What questions would Mary ask as she takes the order?
   a.
   b.
   c.
   d.
   e.

6. Give the order in which food items are generally listed on a menu.

7. What is an á la carte menu?

8. Suppose the menu in the food service establishment where you are employed contained the following foods. How would you describe them to customers?
   a. Julienne of Turkey

   b. Lobster á la Newburg

   c. Charlotte Russe

   d. Chicken Friscassée

   e. Au Gratin Potatoes

   f. Hollandaise Sauce

   g. Peach Melba

   h. Sautéed Mushroom Caps

9. Why is it important to answer the telephone at a business in a courteous, business-like way?

ASSIGNMENTS:

I. Examine the menu in the establishment where you work. Are there any foods you would have trouble explaining to a customer? Write out the definitions for these foods.

II. Obtain a sample of the form used in your training station to take orders. Practice completing the form correctly.

GROUP WORK:

I. Role play some of the following situations: suggestive selling, the correct procedure for taking orders from customers with children and from blind customers, dealings with customers on the telephone, and other situations from your training station that require special techniques.

UNIT XII-4

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Serving Customers

TASKS:
30. Serve food to customers.
31. Check the needs of the customers periodically and supply them with needed items.
32. Clear items from the table as the customer is finished with them.

OBJECTIVE: When you finish this lesson, you should be able to
a. summarize procedures for serving food to customers.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 247-253, 239-243.

Several different styles of food service are used in restaurants today. These styles originated in the private homes of European nobility. Over the years they have been modified for restaurant use. The major styles are American, French, Russian, English, and buffet. Some restaurants have combined the features of two or more styles of service to fit their operation. Study the general rules listed below, but also become acquainted with the style of service used in the establishment where you are employed.

1. When serving, start with the person at the right of the host and continue counterclockwise around the table.

2. Serve food from the guests' left with the left hand. Remove dishes from the right with the right hand. Do not stack dishes in front of guests.

3. Hold the plate with the fingers under the plate and the thumb on the edge of the rim of the plate.

4. Always place appetizers and cereal and soup bowls on plates called underliners, and set them in the center of the cover in front of the guest. Place cocktail forks and soup spoons on the right side of the underliner, or set the soup spoon and the cocktail fork at the right of the cover.

5. Place the salad plate to the left of the forks when it is served with the main course. When the salad is a separate course, it is placed in the center of the cover.

6. Place the cup and saucer to the right of the spoons with the cup handle to the right. Place water glasses above the point of the knife. Set additional glasses slightly lower and to the right of the water glass.

7. When refilling glasses or cups, do not pick them up from the table. In booth service this "rule" may have to be broken if it would be awkward or if it would be possible to spill the beverage on the customer. In this case the glass, or cup and saucer, is removed from the table to be refilled.

8. Handle glasses by the stems or near the base. Pick up cups by the handle.

9. If the guest serves himself, present the platter to him at his left side with the serving utensils on the right side of the platter and the handles toward the guest.

10. Never use soiled, chipped, or cracked dinnerware or glassware.

11. Serve food at the appropriate temperature. Do not let hot foods sit and become cold or let cold food come to room temperature.

12. Place the plate of food in the center of the cover, with the entree closest to the guest.

13. Serve only food that is appetizing and is attractively garnished. If you think it "looks good enough to eat," your customer probably feels the same.

BOOTH SERVICE

It is impossible to serve guests seated in booths in the same manner as those seated at tables. A waiter or waitress must stand at the end of the booth rather than being able to move around the table to each guest. Turn toward the guests on your right and serve them with you left hand. Serve the guest next to the wall first and then the guest sitting at the end of the booth. This pattern eliminates the possibility of upsetting cups, glasses, or plates that have already been placed in front of the guest on the outside. Then turn toward the guests seated on your left and serve their food with your right hand.

You may also have to pick up beverage glasses or cups from the table to refill them if it is hard to reach them from the end of the booth.

You must always be observant of the customers regardless of where they are seated. But when serving a booth, take extra precautions.

1. Make guests aware that you are about to reach across the table. Say, "Here is your coffee, sir," "This plate is hot," or "Excuse me, sir," before reaching across the table. Letting customers know what you are doing can help prevent sudden, unexpected movements which can lead to unfortunate and dangerous spills.

2. If a customer attempts to be helpful by reaching for the food you are serving, stop and allow him to take it from you. If you continue toward him, an accident may result.

COUNTER SERVICE, CARRY-OUT SERVICE, FOUNTAIN SERVICE

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Benentt Co., Inc., 1974. pp. 217-220, 223-226.

The job of food server in these three types of service requires not only the serving of food but often the preparation of some foods. It requires the ability to compute sales and make change quickly and accurately. It also is important to be able to work quickly and efficiently so that a large number of customers can be served.

Customers are often in a hurry and want to be served quickly, but not in a haphazard way. The customer should receive the same courteous, good service whether he is sitting at a table in a fine restaurant, sitting at a counter, or standing at a carry-out counter.

CAFETERIA SERVICE

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 220-223.

In cafeteria service your concerns are somewhat different than in other types of service and your duties are different. All food items are ready to serve when the customer arrives. The serving equipment is in place and ample supplies of food are in the serving containers.

Each person who works on the cafeteria line has a responsibility for performing his tasks accurately and efficiently. When one person fails to carry out the tasks assigned to him, service all along the line is delayed, and dissatisfied customers result.

Steam Table

One of the major work areas on the serving line is the steam table. If you are assigned to this area, be sure everything is ready before serving begins. Check for an orderly and attractive arrangement of food in the containers. Overlap slices of meat, place meat balls in straight rows, and place meat loaves in the center of the pan. Arrange garnishes attractively among the food. Arrangements of this kind make the food more appetizing than if it is just dumped into the container. Be sure appropriate serving equipment and plates or serving dishes are placed in a convenient location.

During service, wipe the rims of the containers brought from the kitchen before putting them into the steam table. Keep them clean while serving. Wipe up spilled foods immediately because baked on particles are difficult to remove.

Salad Counter

Another area of the serving line to which the worker may be assigned is the salad counter. As a salad counter worker, you clean counter tops and shelves and arrange salads attractively before the serving period begins. Group salads of a similar kind together. Grouping helps the customer to make his selection. Arrange salads so there is a contrast in color. Putting coleslaw next to potato salads and cucumber salads results in an arrangement of several light or white foods. To make a more attractive arrangement intersperse slices of tomatoes or other colorful foods with white or light colored foods. On the other hand, a beet salad next to tomato slices does not appear very pleasing. Separate colors that do not go together with colors that harmonize well with both.

Arrange items in the salad counter in an orderly manner. Put plates of the same size in a row. Place bowls together and use them to separate rows of plates. Arrange salads so the highest part of the lettuce leaf is at the back of the plate so the customer can see the salad. Alternate rows of gelatin salads with rows of sliced fruits or vegetables to provide variety in height and type of arrangement.

Dessert Counter

The appearance of the dessert counter is as important as the rest of the serving line. Keep it clean and arrange items in any orderly and attractive manner. Group desserts according to type to aid the customer in making his selection. The same suggestions as were given to salads also apply here, i.e., keep containers of the same size and same foods together, and keep rows straight and even.

Place pieces of cake so that both the cake and the icing can be seen. Place pieces of pie so that the point is toward the customer. Center both cake and pie on the plate.

Portioning and Plating Food

One of the most important factors in serving the food to the customer is knowing the size of the portion planned by the cafeteria manager. Portion sizes may be expressed by weight, number, measure, size of scoop or ladle, or a combination of these, such as two #20 scoops. Too large a serving spoon puts the business "in the red" and too small a serving disappoints the customer. Another decision to make about serving is what type of container is best. Should it be served on the plate or in a separate dish? Should the gravy be put over the meat or at the side of the meat? All of these questions should be answered before the customers start arriving because there is no time to find out once serving begins.

When serving the food, place it within the rim of the plate, not extending over the edge. Place relishes accompanying the meat next to the meat and on the opposite side of the plate from the potatoes. This arrangement prevents the relish and gravy from mixing. Wipe food particles from the rim of the plate before handing it to the customer.

Ask the customer for all the information necessary for serving the food. Some of the types of questions that may need to be asked are: Do you care for gravy with your meat? Do you want rare, medium, or well done meat? Do you want toast with the creamed tuna? What dressing do you want on your salad?

Replenishing the Counters

Exchange full pans for empty ones instead of putting fresh food into the used containers. Scrape food off the sides of the containers to prevent food from drying out and appearing unappetizing. Dish the food from the back of the pan toward the front and in an orderly system across the pan. Continually move salads and desserts forward from the back and place fresh items behind them.

Regardless of the area where one works, cafeteria servers should be familiar with the food items offered on the day's menu and should have some knowledge of the ingredients used in the dishes being served. When a customer is having difficulty making a choice, workers should be able to make a suggestion. Ability to meet customers' requests in the serving line is aided by developing speed in serving food and maintaining a polite and tactful serving manner.

QUESTIONS:

1. From which side of the customer are foods generally served?

2. What procedure should be followed when the customer is serving himself?

3. a. Where is the salad plate placed when it accompanies the main course?

   b. Where is the salad plate placed when it is served as a separate course?

4. Where are the cup and saucer placed?

5. How can you insure that the customer is served food that is the correct temperature?

6. Should the host at a table of guests be served first or last?

7. Arrange the steps for serving a dinner in the correct order.
   _____ a. Serve the entree.
   _____ b. Fill water glasses.
   _____ c. Remove first course dishes.
   _____ d. Serve the appetizer.
   _____ e. Remove main course dishes.
   _____ f. Serve dessert.
   _____ g. Place silverware needed for dessert.
   _____ h. Refill coffee cups.

8. Some hints for loading trays are:
   a. Place the heavier items in the ______________________________
   ______________________________.
   b. Place glasses, silver, and cups ______________________________
   ______________________________.
   c. Place coffee pots or pitchers ______________________________.
   d. Load the tray so that it is ______________________________.

9. When serving the main course, how should you turn the plate when it is placed in front of the customer?

10. Describe how to serve people seated in a booth so that accidents are more easily avoided.

11. How does counter service differ from table service?

12. Why is it important for cafeteria counter workers to serve portions of the size planned by the cafeteria manager?

13. As Sally arranged the salads at the salad counter, she put them in the following order: a row of carrot salads, a row of beet slices, a row of tomato slices, a row of coleslaw, a row of cucumber slices, and a row of shrimp salads. They were placed in neat, orderly rows, but the manager made one suggestion. What do you suppose it was?

14. Why do the serving personnel need to be familiar with the foods they are serving?

15. How do the kitchen workers know a counter worker needs new food supplies for the counter during the serving period?

ASSIGNMENTS:

I. Observe counter workers in food service businesses and in your school cafeteria. Keep a list of work methods or skills that make the counter worker efficient. Share and discuss your list with others in the class.

II. Note good and poor procedures you have observed waiters and waitresses using when serving customers. Which of these practices do you follow in your work? List a plan for correcting the poor procedures you now follow.

GROUP WORK:

I. Form groups to role play the correct service of food in table service, booth service, counter service, carry-out service, and cafeteria service.

UNIT XII-5

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Fundamentals of Bus Service

TASKS:
33. Replenish serving station during serving hours.
34. Fill condiment containers, arrange dishes and silverware in appropriate places.
35. Remove soiled items from tables and stations.
36. Carry loaded trays between kitchen and serving area.
37. Sort, count, and store utensils at designated places.

OBJECTIVES: When you finish this lesson, you should be able to
a. describe the tasks involved in bus service
b. relate the importance of bus service to the efficient operation of the food service business.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 216, 254-255.

The duties of a dining room helper may be either assigned to someone hired especially for that position or divided among other employees. Regardless of who does them, these tasks are most important for the smooth operation of the food service business.

PERSONAL CHARACTERISTICS

The job of busboy or busgirl does not usually require previous experience. This is a valuable way, however, to learn the food service business. Alert, competent young men and women can advance readily to better paying jobs from the position of busboy or busgirl.

Cooperation in working with others is an essential part of bus service. One of the tasks in bus service is replenishing the serving station with clean utensils, china, linens, ice, and condiments during serving hours. This must be done promptly, quietly, and in a sanitary manner. If adequate supplies are not available for the service host or hostess, they cannot provide prompt service to the customers. The person assigned to this task must be alert and keep the serving station replenished without being reminded.

Let your honesty shine! If there is a container for the tips of each waiter or waitress, put any tips you find in the right container. If there is no container and you have received no instructions, leave the money where you found it. Pocketing another's tips is dishonest, and you will soon be found out.

Good grooming is essential for the busboy or busgirl because he or she is constantly in view of customers. Start the day with a clean, unwrinkled uniform. If your uniform becomes very soiled, change to a fresh one, or if you are wearing an apron, turn it around. Soiled garments are an unappetizing sight to customers.

Good health is also essential for the dining room helper. A strong back and strong arm and leg muscles are needed for heavy lifting. The use of proper lifting techniques as described in the unit on safety is essential. In addition, healthy feet are a must for constant standing and walking. Sturdy shoes are necessary to keep feet in good condition. Bare feet, sandles, or dress-type shoes are not acceptable for health and sanitary reasons.

The employee assigned to bus service often comes in contact with the customers. A pleasant, cheerful attitude helps make the customers feel comfortable. When customers make requests, fill them promptly. If they have a complaint or suggestion, report it to the head waiter or manager immediately.

BUS SERVICE TASKS

One of the most important parts of bus service is keeping things clean. A variety of cleaning tasks may be assigned depending on the job assignments at the institution or business. More customers are lost because of uncleanliness than for any other reason. Thus, keeping things spotless is a primary factor in customer satisfaction and no cleaning task should be considered unimportant or be done in a careless manner.

Use sanitary methods in transferring supplies from the trays or carts to the serving station. Pick up utensils by their handles, never by the "business" end. Transfer ice and condiments to serving containers with tongs, spoons, or other appropriate utensils: Never with fingers! These practices help to prevent spreading diseases and contaminating food. Wash your hands with soap and water after handling dirty dishes and before handling clean ones. Customers have germs, too.

When carrying loaded trays or pushing carts, watch where you are going. Do not go too fast. As a safety precaution, back through the door to the kitchen or dishroom. This helps to prevent spills if someone happens to be coming through the door at the same time.

Keep spills wiped up anywhere you see them or see that the appropriate person does. They are dangerous to everyone, including customers.

Clearing Tables

Another task classified as bus service is removing soiled items from tables and stations. Use trays or carts to save steps and to decrease the amount of time spent on the task. Again, take care to pick glassware up by the base, utensils by the handles, and plates by the rim. This practice helps protect the employee from any diseases or illnesses the customer may have.

Clear tables and stations as quietly and as quickly as possible. Picking up all of one item, such as glassware, before starting with another item helps to speed up the task. Dishes and silverware are very expensive items in a restaurant. Avoid breakage, damage, and loss of these items.

Scrape dishes into the proper containers. Stack them according to size, with large dishes on bottom. Do not stack dishes too high or in a careless manner; this increases the chance of breakage. Sliding or rubbing plates together causes scratches. Do not stack glasses or coffee cups inside one another. Glasses can become firmly stuck together and stacked cups tip over easily. Lay them on their sides. Place silverware in appropriate containers or together in one place. Be careful not to scrape silverware into the garbage. Do not scrape plates in view of customers. If you cannot stack the plates due to food on them, place them aside. Do not overload the bus cart, as it is already top-heavy.

After clearing a table, wipe it clean with a towel used only for tabletops (bustowel). Use a second dry towel, or napkin for wiping seats in booths or on chairs. Wipe crumbs into your hand or onto a plate, not onto the floor.

Wipe out ashtrays and replace them, unless you cannot get them clean. In that case, leave a clean one and take the soiled one to the kitchen for washing.

If you do your job well, customers are unaware of your activities.

When depositing dirty dishes in the dishroom do it an organized way. Place plates of the same size in stacks and silver in a pre-soak solution or in bins with silver of the same kind. Put glasses and cups upside down in cup and glass racks. An organized dishtable helps prevent breakage and leaves space in which to work.

Replenishing Supplies

Be alert for areas that need your attention. When you are near a serving station, check for needed supplies and bring them with you as you return from the kitchen area.

At the end of the serving period, the busboy or busgirl may be responsible for bringing clean utensils from the kitchen to the serving station. He or she then sorts, counts, and stores the utensils in the proper place so the utensil is stocked for the next serving period. Any shortages in the number of items should be reported to the manager.

QUESTIONS:

1. Mr. Jones, the manager, pointed out that getting and keeping customers is perhaps the most important aspect of food service. Many times customers are lost for reasons other than inferior food. Describe four conditions which might discourage customers from patronizing the food service establishment in which you are employed.
   a.
   b
   c.
   d.

2. As a busboy, Joe might not hear complaints from customers as often as the waitresses, but what should he do when he hears a complaint?
    _____a. Tell the waitress.
    _____b. Report it to the manager.
    _____c. Ignore it.
    _____d. Discuss it with the customer.

3. You have previously worked as a busboy or busgirl in a restaurant. You have been hired as a floor boy or girl in a cafeteria. List the duties that will be different in your new job from those as a busboy or busgirl in a restaurant.
    a.
    b.
    c.
    d.

4. Describe some ways to prevent breakage, damage, and loss of dishes and silverware during the clearing of tables.
    a.

    b.

    c.

5. List some sanitary methods you should use in your work.

ASSIGNMENTS:

I. Develop a check list for good grooming for a busboy or busgirl. Use the check list to identify where you could improve your grooming habits. When you have corrected the poor habits, describe the results to your teacher.

II. List the procedures you now use to clear and clean tables at your training station. Describe how you could improve your work regarding sanitary methods and efficiency. Try out the new plan and discuss the results with your teacher.

GROUP WORK:

I. List the duties of a busboy or busgirl at your training station. Discuss and compare your list with other students to see how the job differs in various food service businesses.

UNIT XII-6

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Handling Money

TASKS:
38. Itemize and total the price of each order.
39. Present check to customer.
40. Make change.

OBJECTIVES: When you finish this lesson, you should be able to
- a. describe the procedure for presenting checks to customers
- b. explain the procedure for making change.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 234-237.

It takes a real diplomat to tactfully present a check to a customer. If you fail to present it gracefully and diplomatically, you can embarrass yourself and your customer.

When the guests have finished their meal, complete the guest check away from the serving area, then present it to the host. If the guest is to take the check to the front of the restaurant and pay the cashier, place the check face down, on the table on the host's left. Thank the guest and make a brief remark such as, "You may pay the cashier."

Another way to present the check is to place it face up on a tip tray. The host places the payment on the tray. You then take the tray, check, and payment to the cashier, and return all the change on the tray to the guest. Thank the guest and invite him to return again.

Checks may also be paid with credit cards. Check to be sure the credit card is signed by the cardholder. Place the card in the stamping machine with the credit slip on top; slide the bar over both to imprint the slip. Then complete the credit slip by listing dinners, tax, and bar total on the slip as directed by your employer. Total the amount. The cardholder adds a tip if he desires. Return the card, credit slip, and a pen to the guest for his signature. After he signs the slip, compare the signature with the one on the card to be sure they are identical. Then return the guest's credit card.

In most fast-food businesses, the guest pays for his food when he places his order. Make change quickly and accurately. Study the reading assignment to learn how to make change correctly and follow any additional procedures outlined by your training sponsor.

QUESTIONS:

1. Describe the correct way to present a guest check if the customer is to pay the cashier.

2. Describe the procedures for accepting payment of the check with a credit card.

3. Describe the counting of change for the following restaurant checks and payments:
   a. Check of $1.76 from payment of two one-dollar bills and a penny.

   b. Check of $3.15 from payment of a five dollar bill.

   c. Check of $6.83 from payment of two five dollar bills.

   d. Check of $17.94 from payment of a twenty dollar bill.

GROUP WORK:

I. Outline the procedures used at your training station for presenting guest checks. Form groups to discuss and compare the procedures used in various food service businesses.

II. Role play the correct ways of presenting checks to guests and making change.

UNIT XII-7

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Sidework and Closing Duties

TASK: 41. Do sidework and perform closing duties.

OBJECTIVES: When you finish this lesson, you should be able to
- a. describe methods of keeping sidestand heated and fully supplied
- b. fill and maintain condiment containers
- c. use correct method to fold napkins.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 77, 212-214.

Sidework refers to the duties a waiter or waitress must perform, other than serving guests, before and during the meal. At the end of a meal the dining area must be made ready for the next serving period. The duties included here may vary from one business to another depending on the size and the number of people employed.

Station and Sidestand Duties

A station is the area of the dining room to which one has been assigned. The number and type of tables included in a station vary. Some stations may be smaller or easier to serve than others due to room arrangements. As a result, waiters and waitresses may be moved from one station to another on a rotation basis. In some restaurants, however, the "better" stations may be permanently assigned to the most professional employees.

When assigned to a station, the waiter or waitress must keep it stocked and ready for use.

Condiment containers used on tables in your station should be kept clean and filled. These containers may include:

Salt and pepper shakers
Sugar bowls
Syrup dispenser
Catsup, mustard, mayonnaise, jams and jellies, napkins, toothpicks, and straw dispensers.

Check condiment containers frequently to be sure they are clean and filled. Wipe the outside of the containers with a damp cloth and then polish with a dry cloth.

Check sugar bowls for hard lumps of sugar which may indicate that a damp spoon was placed in them. Empty the contents, and have the bowl washed properly before refilling. If containers with screw tops are used, be sure the top is fastened securely and the spout is clean and unclogged.

Check the openings in salt and pepper shakers and unclog holes with a toothpick when needed. In humid areas, it may be necessary to put rice into salt shakers to prevent the salt from becoming damp.

A sidestand or service unit is usually located near each station. The sidestand is the serving and storage unit where the things needed for table service are kept. The sidestand helps reduce the number of trips one must make to the kitchen and storage areas. One of your duties before meal service starts may be to stock your sidestand with the necessary articles. If there is a warming unit in the sidestand, check to see that it is working properly. A list of items frequently kept in a sidestand are listed on p. 77 in Food Service Careers.

Each time you go to your station, check it visually for the following:

Supplies that are getting low
Containers that need cleaning or refilling
Neat appearance.

Notify the busboy of any supplies you need, so that he has time to replace the supplies. Remember that your sidestand is usually in clear view of the guests and should be kept clean and neat.

Cut down on walking. Think ahead about things you need to do each time you go to the sidestand or to the kitchen. If your supplies are very low, it may be faster for you to return them from the kitchen after turning in an order.

Napkins

Many fine restaurants continue to use cloth napkins in their table service. Napkins can be folded in many ways.

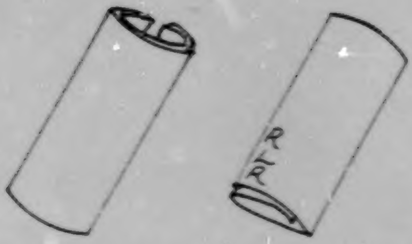
Some of the napkin folds are very elaborate, others quite plain. The type of napkin fold used in the food service establishment where you are now employed is the one you should continue to use there.

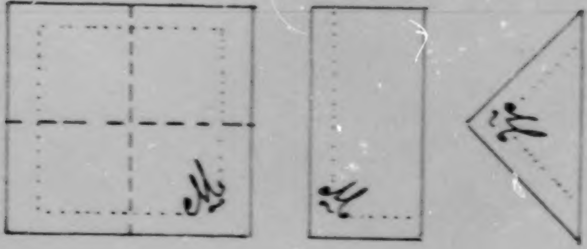
Sometimes a restaurant changes the color of linens and the type of napkin folds used during the day. Be sure that the napkins are always spotlessly clean and freshly pressed before using.

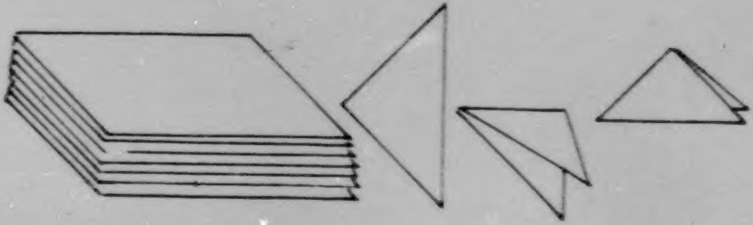
Do not use good table linens to clean up spills on any surface. Treat them with care. They are expensive!

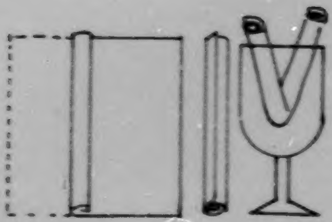
The following illustrations describe how to make some of the various napkin folds.

SIMPLE FOLDS

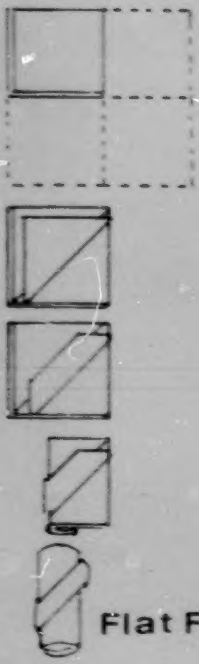


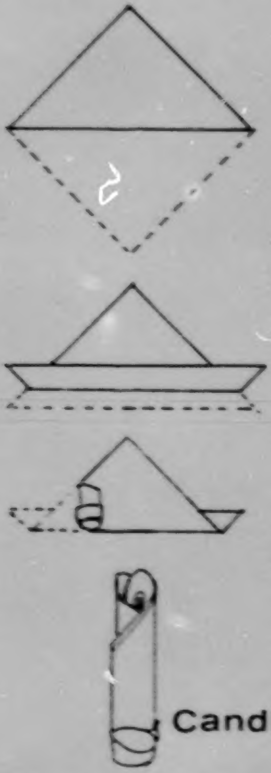


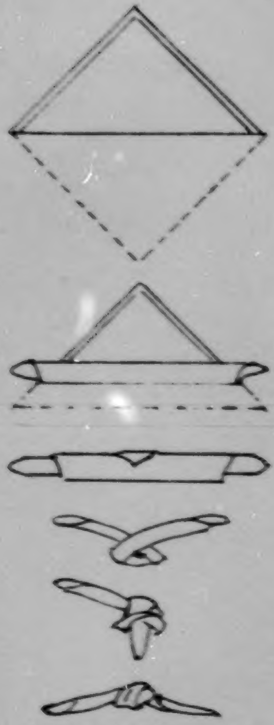


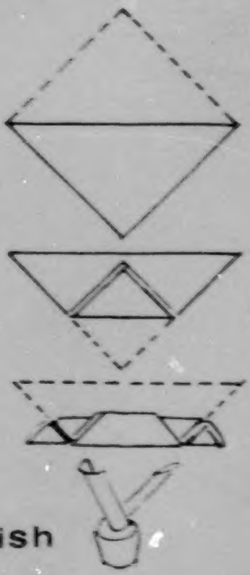


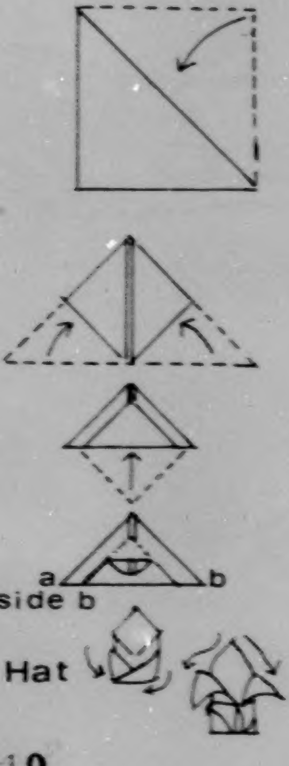
ELABORATE FOLDS


Flat Fold


Candle


Diagonal Roll

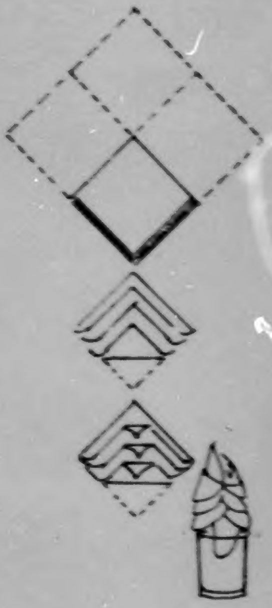

Fish



tuck a inside b

Bishop's Hat

Four Flaps



QUESTIONS:

1. Describe the procedure for keeping salt and pepper shakers clean and the contents free-flowing.

2. Describe procedures for cleaning sugar containers.

3. What checks should be made of the sidestand before meal serving begins?

ASSIGNMENT:

I. Practice making some of the various napkin folds.

GROUP WORK:

I. Demonstrate to other food service employees the napkin folds used at your training station. Compare the folds used at different training stations.

UNIT XIII-1

PROCEDURES FOR STOREROOM CONTROL

SUBJECT: Receiving and Issuing Procedures

TASKS:
42. Follow standard procedures for receiving food and supplies.
43. Requisition or issue food and supplies.

OBJECTIVES: When you finish this lesson, you should be able to
a. cite tasks generally performed by the receiving clerk in food service establishments
b. identify forms used in receiving and issuing food and supplies
c. analyze standard methods of receiving food and supplies
d. identify forms for issuing supplies from the storeroom.

REFERENCE: Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1974. pp. 57, 61.

THE RECEIVING CLERK

The receiving clerk is an important member of the cost control team. He should be alert, accurate, and have some food knowledge. Above all, he must be trustworthy. His main job is to count and weigh the food and supplies delivered and to record what is received. He should also know the importance of receiving the quality ordered. However, quality is usually checked by the manager, assistant manager, dietitian, or one of the cooks.

METHODS OF RECEIVING

In the usual method of receiving, the receiving clerk receives duplicate purchase orders which list the goods ordered. He then checks to see that these goods are delivered.

Some establishments use a method called "blind receiving." In this method, the receiving clerk receives no information about what has been ordered. Vendors omit prices and quantities from their delivery tickets. The receiving clerk must count or weigh every item delivered and make an appropriate entry on the receiving record. This method forces the receiving clerk to count or weigh each item, and not just copy the information from the invoice or delivery ticket.

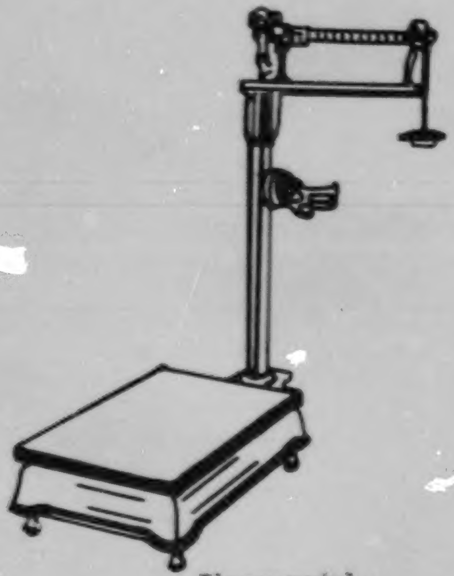
Methods of receiving vary from one food service operation to another. The important thing to remember is that food and supplies should be received and checked in an efficient and orderly manner.

In the receiving process, foods received are matched with what was ordered, using such tools as scales, thermometers, or counts to check quality and quantity. Errors frequently occur in deliveries. Unless a careful check is made of count, weight, and quality, losses can be costly.

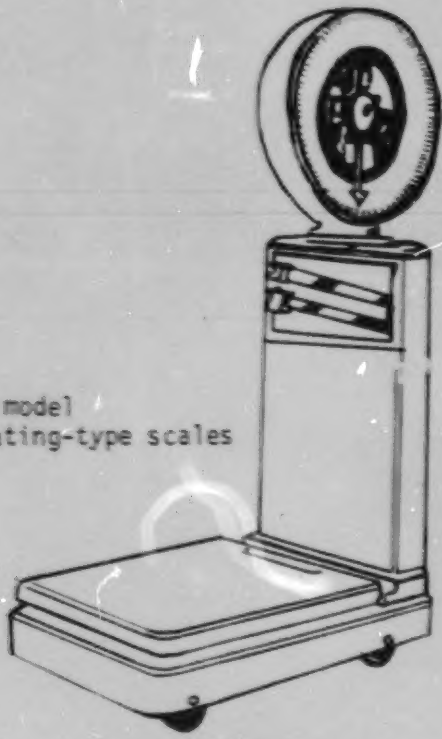
Checking Quantity

Food purchased by weight should be weighed when it is received, since weight shortages in quantity purchases are costly. Money is lost if an order is short by even a few ounces.

Automatic indication-type or beam-type scales are used in the receiving area for accurate weighing. Examples of these two types of scales are illustrated below.



Floor model
beam-type scales



Floor model
indicating-type scales

Each different item should be weighed separately. Even if the total weight agrees with the total shown on the delivery ticket, some items may be short and some over in weight. Items vary in price. A weight shortage in a high-priced item cannot be made up by receiving more of a less expensive item.

Items not purchased by weight should be counted accurately to make sure that all items have been received as shown on the delivery slip from the vendor. Any error in count should be called to the attention of the person in charge of the receiving area so that proper procedures can be followed.

Checking Quality

Losses can occur even when the correct quantity of goods is received, if the goods are of the wrong quality. To meet quality standards, the goods delivered should be the right grade, style, pack, and fill. They should be fresh. They should have been cared for properly. If there is any question about the quality of goods delivered, the person responsible for checking quality should be called.

To inspect fresh fruits and vegetables, randomly check several from the crate. Be sure to check those in the center and bottom of the crate, too.

Take the temperature of highly perishable and chilled foods, such as milk and poultry, and of all frozen items. Observe all frozen foods for signs of past thawing and refreezing, such as ice in the bottom of containers or signs of freezer burn. Learn dating codes on perishable foods and check whether fresh items are being delivered.

Check the labels of canned foods to be sure the goods delivered are of the size and quality ordered. Check style, pack, size, and fill against what was ordered.

Marking Merchandise Received

Perishable merchandise should be marked or tagged as it is received. The following information should be recorded on the tag or marked on the side of the case or package.

Date of receipt
Name of vendor
Description of merchandise
Weight or count when received

The unit price and total price may also be included on the tag.

Marking is done for several reasons. It gives a weight or count which can be checked at a later time to check the accuracy of the original receipt. It aids in using items in the order they were received. The "first in, first out" rule reduces waste from food spoilage. It eliminates the need to weigh or count items still in their original package before issuing them to the kitchen.

Records and Forms

Receiving records are used to maintain a daily record of food and supplies received by the establishment. The principal ways of keeping these records are receiving sheets, individual receiving tickets, and receiving stamps.

Receiving sheets contain the following information: the vendor's name, the date, a description of items received, and the quantity received. The description of the item usually includes the brand name, grade, style, and other identifying information. The quantity is designated by count, weight, and size. In some instances the unit, total cost of items, and the order number are also recorded. Receiving records are usually made out in duplicate. One copy is kept by the receiving clerk and one is sent to the accounting department. A sample receiving record is shown in the illustration below.

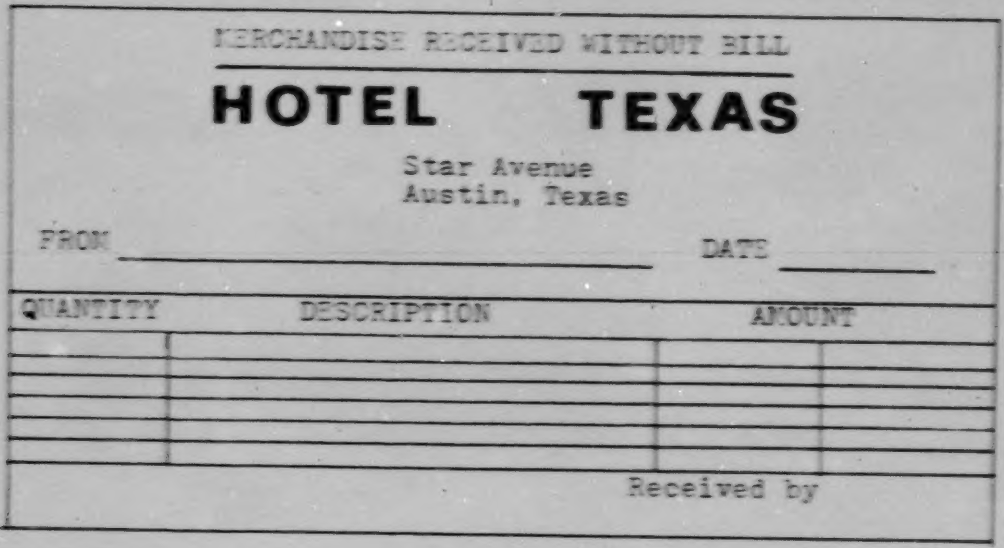
RECEIVING CLERK'S DAILY REPORT

No. ____________
Date ____________

Quan.	Unit	Description	Unit Price	Amount	Total Amount	PURCHASE JOURNAL DESCRIPTION		
						Food Direct	Food Stores	Sundries

____
Signature

Receiving tickets are used when merchandise is received without accompanying invoices. The same information is included on the receiving ticket as on the receiving record. Receiving tickets are sent to the accounting department for use in checking against purchase order and invoice. When the receiving ticket is used, a receiving record is not kept. A sample receiving ticket is shown below.



MERCHANDISE RECEIVED WITHOUT BILL

HOTEL TEXAS

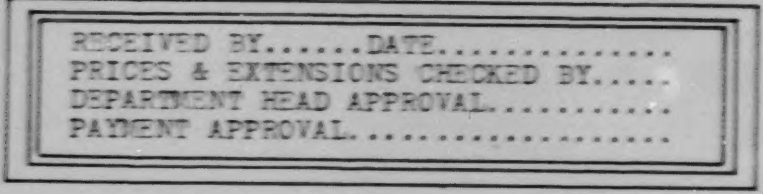
Star Avenue
Austin, Texas

FROM ______________________ DATE __________

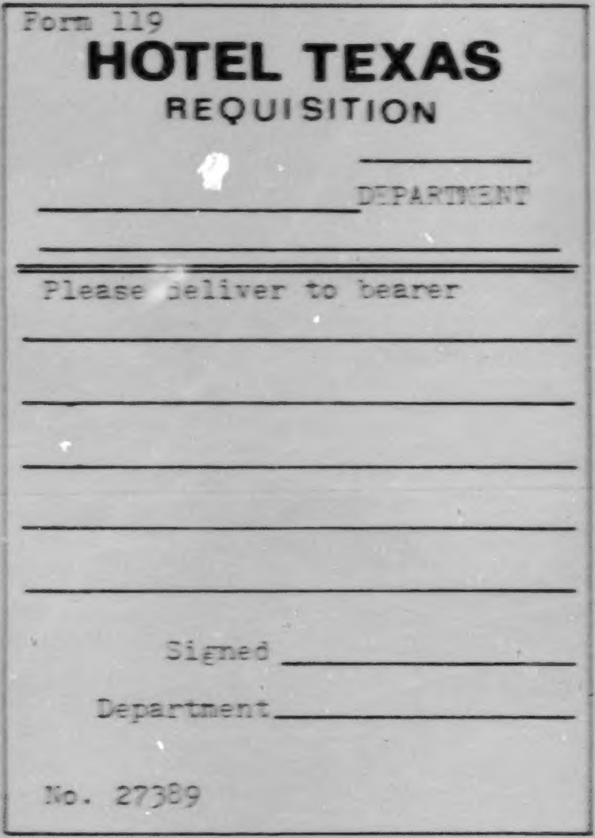
QUANTITY	DESCRIPTION	AMOUNT	

Received by

When invoices, invoice duplicates, or vendor's delivery tickets accompany a delivery, they should first be stamped with a receiving stamp. The receiving stamp usually contains four check points. The first check point is receiving. After the delivery has been checked, the receiving stamp should be initialed and dated by the receiving clerk. A sample receiving stamp is shown below.



RECEIVED BY......DATE..............
PRICES & EXTENSIONS CHECKED BY.....
DEPARTMENT HEAD APPROVAL..........
PAYMENT APPROVAL..................



Form 119

HOTEL TEXAS

REQUISITION

_______________ DEPARTMENT

Please deliver to bearer

Signed _______________

Department _______________

No. 27389

Issuing

The receiving clerk or storeroom worker may also issue supplies to the various departments in the food service operation. To obtain supplies, workers must complete a requisition form listing the supplies needed. The department head must sign the form before the order can be filled. The storeroom worker then fills the requisition. He should not issue any supplies without a signed requisition. Issuing supplies without authorization can cost the establishment money and can cost the storeroom worker his job. The illustration below shows a correctly completed requisition.

The requisition form includes the date and the department requesting the supplies. Clearly state the name and grade of each item needed. A requisition for three cans of peas is not clear. Three No. 10 cans of Fancy peas is clearer. State the size can and the grade of each item needed.

QUESTIONS:

1. The person responsible for receiving food service supplies is the _______________.

2. Jody has been successful in learning the food preparation tasks at his training station. The manager has decided that Jody should also be given an opportunity to work in the receiving area. Since he has some knowledge of food and is a dependable employee, he will assist the receiving clerk for the next few weeks. What are the jobs he will do in the receiving area?

3. Proper methods of quality control minimize the chances of accepting unsatisfactory merchandise. When food and supplies are received from the vendor, the check for quality is usually made by the
_____a. manager.
_____b. cook's helper.
_____c. stock clerk.
_____d. inventory clerk.

4. Receiving records vary according to the food service establishment. What are four items which all receiving records must contain in relation to the food and supplies received?
a.
b.
c.
d.

5. James, the food service employee, is assisting the receiving clerk by checking the delivery from A & B Products Company. Using the information from the delivery invoice as shown below, complete the receiving report.

INVOICE No. 7893

A & B FOOD PRODUCTS COMPANY
100 Main
Anytown, Texas

Order No. 725 Date: Sept. 1 19--

To: Dixie Cafeteria
10 W. 6th
Anytown, Texas

QUANTITY		ITEMS	PRICE	
AMT	UNIT		UNIT	TOTAL
12	1-lb cans	Ground Black Pepper		
2	30 doz case	Grade A Large Eggs		
4	100 lb bag	All purpose flour		
6	6-#10 cans per case	Sliced apples		
1	100-lb sack	Irish potatoes		
1	50-lb sack	Onions		

RECEIVING CLERK'S DAILY REPORT

No. ____________

Date ____________

Quan.	Unit	Description	Unit Price	Amount	Total Amount	PURCHASE JOURNAL DESCRIPTION		
						Food Direct	Food Stores	Sundries

____

Signature

6. Betty receives the morning delivery of bakery products. She notices that three bread wrappers are broken open. Which is the best course of action for Betty to follow? Support your answer by giving reasons for your answer.

_____a. Accept the delivery and report the condition of the bread to the manager.
_____b. Accept the balance of the delivery but refuse the three loaves of bread.
_____c. Check with the food service supervisor to determine the proper procedure before accepting the delivery.
_____d. Call the supplier to tell him about the three bread wrappers.

7. List five qualifications a person should have to work as a receiving clerk.
a.
b.
c.
d.
e.

8. Why is it important that only the exact amount of supplies requisitioned be issued?

ASSIGNMENTS:

I. Outline the method of receiving and issuing food and supplies used at your training station. After studying this unit, list any procedures that might be added that would insure more control over storeroom supplies.

II. Ask you training sponsor for sample forms used for receiving and issuing supplies at your training station. Study these forms and practice filling them out correctly. Compare the forms used at your training station with those shown in the unit.

GROUP WORK:

I. Form groups to discuss and compare the methods, records, and forms used to receive and issue supplies in various food service operations.

UNIT XIII-2

PROCEDURES FOR STOREROOM CONTROL

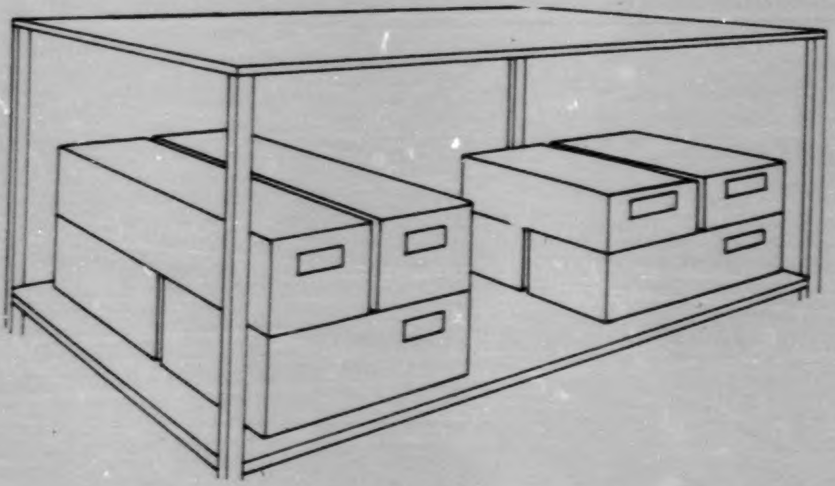
SUBJECT: Storage of Food and Supplies

TASKS:
44. Store food and supplies in appropriate facilities and at proper temperatures.
45. Assist with inventory of food and supplies.

OBJECTIVES: When you finish this lesson, you should be able to
a. describe proper storage methods for various foods and supplies.
b. explain the purposes of inventories in the food service operation.

Storing foods and supplies in the appropriate places and at the correct temperatures helps to maintain the quality of the food. Suggestions for the storage of foods in the different types of storage facilities are given below.

Dry Storage. Arrange foods according to the type of product and in alphabeticle order. This mikes it easier to find the items quickly. When putting up a delivery, place new items behind those already on the shelf. This insures that no food will be pushed to the back and remain in storage too long. Arranging stock with the labels toward the front also aids in quick identification of the items. Stack cans in two or three layers, depending on the shelf space. Open only one carton of an item at a time. Stack the balance on skids until needed. Cross-stack cases of food to allow for adequate ventilation (See illustration below).



Food items, which are stored in bags, such as potatoes, should also be cross-stacked for ventilation.

Store edible food supplies away from non-food supplies. This prevents foods from absorbing odors from cleaning supplies and keeps non-food items from being mistaken for foods.

Refrigerated Storage. Store foods with sufficient space between them to allow for air circulation. Store new stock behind the food already on hand. Do not place food on the floor of walk-in refrigerators. Cross-stack egg cartons to allow for air circulation. Place eggs in a section of the refrigerator where they will not freeze and where they are not near foods with strong odors. Cover butter, milk, and cream tightly and store these items away from foods having odors because they absorb odors easily.

Store large pieces of raw meat and poultry uncovered or loosely wrapped to allow adequate air circulation. Pack fresh fish in cracked ice and store it at a distance from foods, like eggs, which absorb odors.

Store fruits and vegetables at least eight inches off the floor when they are placed in walk-in refrigerators. Cross-stack foods delivered in crates.

Some food service operations provide walk-in refrigerated storage for specific types of foods. Each storage box is kept at the specific temperature recommended for foods stored there. Examples of such areas are the meat box, dairy box, fruit and vegetable box, and fish box.

Freezer Storage. Frozen foods are becoming more common in all types of food service operations. It is important to keep the temperature between 0° F. (-17.8° C.) and 30° F. (-1.1° C.) to keep the food solidly frozen. When storing frozen foods, be sure the foods are well wrapped. Place new items behind the older items. Place foods so there is adequate circulation of air.

Inventories. An inventory is an itemized list of food and supplies on hand. Most food service operations take physical inventories at the end of each week or month. When this is done, all food items on hand are counted and listed. A perpetual inventory record is used in some institutions. It shows how much food is used on a daily basis. An actual physical inventory is done less often.

To take an inventory, use inventory sheets which list items by storage location. Usually two persons take an inventory. One person checks the shelves and calls out the items and amount on hand. The other person records this information on the inventory sheets.

It is better to start at one end of the storage area and call out items in their order on the shelf rather than to look for items using the order listed on the inventory sheet. If the latter method is used, items are easily overlooked.

The inventory is used to determine what supplies need to be ordered. It can also be used to determine the cost of food used during the last week or month. To determine the cost of food used:

List the total cost of food on hand at the previous inventory period.
Add-the daily food purchases.
Subtract-the present inventory on hand.
Answer-the overall cost of food used.

QUESTIONS:

1. Jim was assigned to help with the storing of food and supplies. Place an X in the blank by things you would not do if you were Jim. Give reasons for your choices.

   _____a. Place new stock in front of old stock.

   _____b. Cross-stack bags of potatoes.

   _____c. Place foods in walk-in refrigerator close together.

   _____d. Store fish at a distance from milk.

   _____e. Store fruits on shelves in walk-in refrigerator, not on the floor.

2. Why are foods in the dry storage area usually arranged by type of product and in alphabetical order?

3. Describe the proper storage method for eggs.

4. Describe how to store fresh fish.

5. When are physcial inventories of the storage area usually taken?

6. Explain the reasons for taking an inventory.

ASSIGNMENTS:

I. Describe the storage procedures you now use. After studying the unit, how might you improve these procedures to maintain the quality of the products and to make it easier to gather items to fill requisitions for supplies?

II. Outline the procedure used at your training station for inventory of supplies on hand.

GROUP WORK:

I. Work with other food service employees to compare the procedures used in various food service establishments for the storage of food and supplies.

ANSWER SHEETS
FOR
STUDY QUESTIONS

ANSWER SHEET--UNIT I-1

WHAT IS A FOOD SERVICE EMPLOYEE?

SUBJECT: Job Opportunities in Food Service

1. greater national prosperity; higher family income; longer life span; more women workers; more emphasis on leisure activities
2. in-plant feeding units
3. franchise
4. management; production; sales and service; sanitation
5. back-of-the-house
6. front-of-the-house
7. work station
8. (Any five of the following)
   Hostess
   Counter worker
   Waitress or waiter
   Busboy or busgirl
   Cashier
   Bookkeeper
   Receiving clerk
9. (Any five of the following)
   Cook
   Dishwasher
   Kitchen helper
   Head chef
   Baker
   Salad worker
   Dessert worker
   Sanitation worker

ANSWER SHEET--UNIT I-2

WHAT IS A FOOD SERVICE EMPLOYEE?

SUBJECT: Employee Qualifications

1. (Any six of the following)
   - Appearance
   - Voice
   - Cooperation
   - Work habits
   - Accuracy
   - Courtesy
   - Dependability
   - Health
   - Initiative
   - Promptness
   - Self-control

2. a. Notify supervisor as early as possible, when emergency arises and you will be absent
   b. Do not leave premises during working hours without supervisor's permission

3. Undue loafing, idleness, gossip, visiting with friends, horseplay, and disorderly conduct

ANSWER SHEET--UNIT II-1

SANITATION

SUBJECT: Food Contamination and Food-Borne Illnesses

1. Hands that touch the hair become contaminated by the organisms which collect in the hair. Hair nets or caps are worn to keep hair from frequent contact with hands and food.

2. 40° - 140° F. (4.4° - 60° C.).

3. Any type of disease or illness caused by taking into the body contaminated food and drink.

4. b. False

5. Improperly cooked shellfish; poultry; eggs; egg products; dairy products; meats; salads with mayonnaise or cream dressings; foods contaminated by pests and unwashed hands.

6. a. In nasal discharges or local skin infections (acne, pimples, boils, scratches and cuts).
   b. They produce a poison.
   c. Refrigerate moist foods during storage periods; minimize use of hands in preparation. Exclude unhealthy food handlers (having pimples, boils and other obvious infections).
   d. Cooked ham or other meat; chopped or pulverized food; cream filled or custard pastries; dairy products; Hollandaise sauce; bread pudding; potato salad; chicken, fish, and other meat salads; "warmed-over" food.

7. a. In soil and dirt
   b. Pressure cooked, low acid, alkaline, and canned foods

8. Botulism.

9. a. Those caused by foods containing harmful bacteria.
   b. Those caused by poisons produced by bacteria in the food.

10. Poultry products should not be left at room temperature more than four hours. The casserole should have been refrigerated.

11. Yes, because ham and poultry mixtures need to be refrigerated to prevent the growth of bacteria.

12. a. The stew should have been placed in shallow pans.
    b. The stew should have been refrigerated immediately.

13. Staphylococcus.

ANSWER SHEET--UNIT II-2

SANITATION

SUBJECT: Sanitation Codes

1. Food and Drug Administration; Public Health Service
2. United States Department of Agriculture
3. State departments of health; City health departments
4. sanitation
5. antiseptic
6. sanitation codes

ANSWER SHEET UNIT--II-3

SANITATION

SUBJECT: Procedures for Dishwashing

1. 170° - 190° F. (82° - 88° C.).

2. Washing, rinsing, sanitizing.

3. germicides; sanitizers

4. detergents

5. a. Scrape and stack soiled dishes for washing.
   b. Wash.
   c. Rinse.
   d. Air-dry.

6. Upside down. The wash water can get in and the rinse water can drain out.

7. a. Allow silver to air-dry a few minutes.
   b. Unload onto a clean dry cloth on the silver sorting table.
   c. Pick up silver by handles and place in silver trays.

8. bacteriological

ANSWER SHEET--UNIT II-4

SANITATION

SUBJECT: Cleaning Versus Sanitizing

1. clean; sanitary

2. When sanitation is a way of life, it is something that is done as an ordinary procedure. Its importance is recognized, and everyone accepts his share of the responsiblity for maintaining high standards of cleanliness and sanitation.

3. cleanliness

4. a. disease
   b. food poisoning
   c. spoilage
   d. off odors and off flavors.

5. a. Equipment may not function properly.
   b. The quality of the product may be affected.
   c. Maintenance and repair costs are increased.

6. bacteria

7. a. to store equipment, dishes, pots and pans, and tools in enclosed areas or upside down.
   b. to cover any leftover food.

8. equipment

9. Cleaning indicates absence of soil; sanitizing indicates absence of harmful bacteria, molds, fungi, or yeast.

10. water; friction; a wetting agent (soap or detergent).

11. Chemicals.
    Temperature.

12. To ensure that all necessary cleaning and sanitizing is done.

13. False

14. False

15. False

ANSWER SHEET--UNIT II-5

SANITATION

SUBJECT: Pest Prevention

1. Roaches, flies, ants, and rodents (rats and mice)
2. bacteria
3. Pest control measures
4. pest control measures; proper sanitation; and good housekeeping
5. report the information to the supervisor immediately

ANSWER SHEET--UNIT II-6

SANITATION

SUBJECT: Care of Furniture, Floors, and Surface Areas

1. clean
2. running your hand over the table top
3. once
4. equipment
5. figure 8
6. d. Hardwood
7. f. Terrazzo
8. g. Vinyl Tile
9. d. Hardwood
10. e. Rubber Tile
11. a. Carpet
12. f. Terrazzo
13. c. Clay Tile
14. d. Hardwood

ANSWER SHEET--UNIT III-1

SAFETY

SUBJECT: Safety Precautions

1. Do not leave knives on work tables or in sink.
2. Place articles securely on the shelf so they will not fall off.
3. See that electric cords are in good repair.
4. Use a safe ladder and avoid over-reaching.
5. Promptly report any hazards such as broken floor boards, tiles, worn mats, or traffic obstructions.
6. Always dry hands before touching electrical equipment.
7. Turn handles of cooking utensils away from edge of stove.
8. Clean up wet or greasy spots promptly.
9. learn safe habits; practice safe habits; and never fall back into old, careless habits
10. entrances and exits for easy flow of traffic; fireproofing and fire equipment; and proper arrangement and installation of equipment
11. people who have many accidents usually caused by carelessness or lack of physical coordination
12. slips and falls; cuts; burns; strains from lifting
13. fatigue

ANSWER SHEET--UNIT III-2

SAFETY

SUBJECT: Fire Safety

1. deep-fat fryers; ranges; broilers
2. Baking soda

ANSWER SHEET--UNIT IV-1

NUTRITION

SUBJECT: Factors Influencing Eating Behavior

1. food
2. culture
3. food fallacy
4. food fad
5. fad diet

ANSWER SHEET--UNIT IV-2

NUTRITION

SUBJECT: The Basic Four Food Groups

1. c. Milk Group
2. b. Meat Group
3. b. Meat Group
4. d. Vegetable and Fruit Group
5. a. Bread and Cereal Group
6. b. Meat Group
7. c. Milk Group
8. a. Bread and Cereal Group
9. d. Vegetables and Fruit Group
10. a. Bread and Cereal Group
11. 2 or more 8 oz. cups daily for adults; 4 or more 8 oz. cups for teenagers; and 3 or more 8 oz. cups for children (6 oz. cups for some children under 8)
12. 4 or more servings.
13. 2 or more servings.
14. 4 or more servings.
15. Basic Four food guide

ANSWER SHEET--UNIT IV-3

NUTRITION

SUBJECT: Nutrients

1. nutrition
2. nutrients
3. body building
4. carbohydrates
5. amino acids
6. fats
7. fat-soluble vitamins
8. cholesterol
9. complete protein
10. minerals
11. water-soluble vitamins
12. trace minerals
13. iodized salt
14. water
15. malnutrition
16. g. Vitamin A
17. c. Iodine
18. a. Calcium
19. 1. Vitamin K
20. b. Carbohydrates
21. j. Vitamin D
22. f. Protein
23. k. Vitamin E

24. d. Iron

25. h. Vitamin B Complex

26. e. Phosphorous

27. i. Vitamin C

ANSWER SHEET--UNIT IV-4

NUTRITION

SUBJECT: Nutrition for Persons of Various Ages

1. activities; size; age; stage of growth
2. calorie
3. metabolism
4. calories or joules
5. milk; iron-rich foods
6. increase in activity; a rise in basal metabolism
7. weight control
8. less

ANSWER SHEET--UNIT IV-5

NUTRITION

SUBJECT: Planning Nutritious Meals

Meal	Milk and Milk Products	Fish, Eggs, and Meat	Fruits and Vegetables	Bread and Cereals
BREAKFAST	Milk	Scrambled Eggs Bacon	Orange Juice	Dry Cereal Whole Wheat Toast
LUNCH		Fried Chicken	Buttered Squash Tossed Salad	Buttered Rice Lemon Cake Pudding Hot Bread
DINNER	Cottage Cheese Milk		Asparagus Fresh Fruit Ambrosia	Italian Spaghetti Hot Bread

2. Yes

3. a. Type of service
   b. Size of the operation
   c. Kind of equipment
   d. Number and abilities of employees
   e. Market price and availability of food

4. a. Looks attractive and tastes good
   b. Provides the necessary nutritional requirements
   c. Satisfies the tastes and needs of individuals
   d. Is within the budget of the institution

5. bedtime nourishment

6. menu planning form

7. general diet

8. cycle menus

9. b. Puréed peas

10. a. Ice cream soda

11. b. Baked apple

12. b. Replace cauliflower with green beans

13. c. "Would you care for a baked potato and a salad with your steak, sir?"

ANSWER SHEET--UNIT V-1

SMALL EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Hand Utensils

1. Cook's, utility, or kitchen fork
2. Sandwich spreader
3. Melon ball scoop
4. Pie knife
5. Spatula
6. Turner
7. b. Sandwich spreader
8. e. Hamburger turner
9. d. Spatula
10. d. Spatula
11. a. Cook's, utility, or kitchen fork
12. c. Pie knife or server
13. a. Cook's, utility, or kitchen fork
14. d. Spatula
15. Ladle: used to portion liquids or emulsions.
16. Pastry brush: used to spread melted butter or sauce.
17. Pierced serving spoon: used to serve foods which need to be drained.
18. Plate scraper: used to scrape dishes and mixing bowls.
19. Tongs: used to serve foods without touching them.
20. Wire whip: used for stirring or whipping foods.

ANSWER SHEET--UNIT V-2

SMALL EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Knives

1. a. Boning
   b. Bread
   c. Fruit and Salad
   d. French
   e. Paring
   f. Butcher
   g. Peeler
   h. Slicer

2. g. Slicer, or b. Bread

3. f. Peeler

4. a. Boning, or c. Fruit and Salad

5. d. French

6. b. Bread

7. c. Fruit and Salad

8. a. Boning

9. g. Slicer

10. d. French

11. e. Paring

12. g. Slicer

13. a. Boning

14. f. Butcher

15. b

16. a

17. b

18. b

19. b

20. a

ANSWER SHEET--UNIT V-3

SMALL EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Can Opener

1. To remove lids from cans ranging from small through institutional sizes.
2. The nicks and grooves may create metal shavings that could drop into the food.
3. To remove food deposits that may cause off-flavors and odors in food and to prevent interference with the operation of the can opener.

ANSWER SHEET--UNIT V-4

SMALL EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Dippers

1. c. Handle

2. d. Bowl

3. a. Vane

4. b. Lever

5. a. 10 T.
   b. 1/2 c.
   c. 6 T.
   d. 1/3 c.
   e. 1/4 c.
   f. 3 T.
   g. 2 2/3 T.
   h. 2 T.

6. h. 30

7. f. 24

8. c. 20

9. b. 16

10. e. 12

11. g. 10

12. a. 8

13. d. 6

14. The number of the dipper size is the same as the number of servings per quart.

15.

	NUMBER SERVINGS PER QUART	SIZE IN OUNCES
a.	12	2 1/3 to 3
b.	16	2 to 2 1/4
c.	6	6
d.	10	3 to 4
e.	8	4 to 5
f.	24	1 1/2 to 1 3/4
g.	20	1 3/4 to 2
h.	30	1 to 1 1/2

16. e. #16

17. c. #10

18. a. # 6

19. f. #20

20. b. # 8

21. g. #24

22. d. #12

23. h. #30

24. a. Wash in warm water.
    b. Use recommended amount of detergent.
    c. Rinse in clear water with recommended amount of disinfectant.
    d. Allow to drain and air-dry.

ANSWER SHEET--UNIT V-5

SMALL EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Weighing and Measuring Equipment

1. Move a straight knife or spatula across the top edge of measuring container to remove the excess ingredient.
2. The straight edge metal cup gives greater accuracy when measuring dry and solid ingredients. The glass cup with the lip is more practical for measuring liquids, as it is more accurate and prevents spillage.
3. Brown sugar should be packed firmly to insure the accuracy of the measurement. When loosely packed, the amounts would vary.
4. Fill the bowl of the 1/4 teaspoon and level it off. Using the tip of a knife, make a lengthwise cut the length of the spoon; remove half of the allspice onto waxed paper. 1/8 teaspoon will be left in the spoon.
5. To make it light and to remove lumps.
6. A standard measure always provides the same amount of the ingredient. This helps to insure products of consistent quality.
7. Because it is faster and more accurate.
8. c. Portion scale
9. d. Spring-type scale
10. a. Baker's scale
11. b. Balance scale

ANSWER SHEET--UNIT VI-1

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Cleaning and Disposal Equipment

1. a. Scraping
   b. Prewashing
   c. Racking
   d. Washing (in machine)
   e. Rinsing
   f. Sanitizing
   g. Air-drying
   h. Clean storage of the utensils until the next use

2. single tank machines; multiple tank machines

3. Upside down in dish machine racks so that the wash water can get in and the rinse water can drain out.

4. Load all of one size and type of dish in one rack.

5. Load the rack loosely, mixing knives and forks with the spoons so that they do not nest.

6. 140° - 160° F. (60° - 71° C.).

7. a. Soaking
   b. Fresh-water rinsing
   c. Hot water or germicide rinsing

8. b. a garbage disposal unit.

9. a. activated.

10. c. gradually.

11. b. all food has been ground.

12. a. in the walk-in refrigerator.

ANSWER SHEET--UNIT VI-2

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Cold Storage Equipment

1. circulate
2. cover
3. frost
4. coldest
5. 1/4
6. daily
7. baking soda
8. 0° F. (-17.8° C.)
9. wrap
10. first
11. 3/8 inch to 1/2 inch

ANSWER SHEET--UNIT VI-3

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Beverage Equipment

1. b. Twice weekly
2. c. Both a and b
3. c. Both a and b
4. b. remove sizing.
5. a. rinse the filter in hot water.
6. b. store the filter in clean container with fresh cold water.
7. c. when undesirable odors persist.
8. a. an urn cleaner and a stiff brush.
9. c. brush and hot water.
10. a. soaking all parts in a cleaner.
11. b. fresh, cold water.
12. a. dumped immediately after the coffee is brewed.
13. c. improve the flavor by giving the coffee a unified blend.
14. b. cold water.
15. c. the top bowl of the vacuum coffee maker.
16. a. boiling.
17. a. heat.
18. c. reduce the heat.
19. b. vacuum created in the lower bowl.
20. b. removed.
21. Cleanliness of the coffee maker is essential because the taste and flavor of coffee is affected by leftover coffee deposits.
22. Metallic pots give a metallic taste to the beverage.

23. Hot water sets the milk residue, and the dispenser or pump is harder to clean.

24. (Any of the following or others)
Orange
Lemon
Lime

25. The opened carbonated drinks may lose their carbon dioxide.

26. a. Ice cubes
b. Flaked ice
c. Cracked or chipped ice

27. Use a scoop to remove ice from the bin.

28. Melt the ice completely and drain the bin. Examine the bin carefully before filling with ice.

ANSWER SHEET--UNIT VI-4

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Food Cutting Equipment

1. a. Be sure cord is dry and free from grease.
   b. Be sure hands are dry.
2. unplugged
3. At zero.
4. Hot detergent solution.
5. g. "On and Off" switch
6. d. Food carriage
7. f. Gauge plate
8. i. Scrap tray
9. a. Blade control indicator
10. h. Receiving tray
11. c. Blade or slicer knife
12. b. Blade guard
13. e. Food holder
14. a. See that the machine is completely assembled with all parts in place.
    b. See that the clamp nuts are turned to hold bowl guard in place.
15. a. Gradually.
    b. 2/3 full.
    c. Never use fingers to push food under blades.
16. Scrape food down from the outer edge toward the bottom of the bowl.
17. The knives continue to rotate for several seconds after the machine is turned off.
18. Prepare the chopper for the next continuous operation or clean it.
19. A large spoon.
    Opposite to direction the bowl is rotating.
20. Meat with bones or gristle will damage the knives and the gears.

21. a. Replace guard.
    b. Attach bowl to base.
    c. Reattach knife blades to shaft.
    d. Drop guard into position.

22. permanently installed

23. water

24. sweet potatoes; carrots; parsnips

25. abrasive

26. 2/3

27. 45 to 90 seconds

28. overloading or underloading reduces efficiency

ANSWER SHEET--UNIT VI-5

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Mixing Equipment

1. g. Attachment socket
2. d. Bowl raising wheel or lever
3. b. Bowl
4. a. Beater shaft
5. f. "Off and On" switch
6. e. Gear or speed control
7. c. Bowl support
8. b. Flat beater
9. d. Wire whip
10. a. Dough hook
11. c. Pastry knife
12. b. Flat beater
13. c. Pastry knife
14. d. Wire whip
15. a. Dough hook
16. d. Wire whip
17. c. Pastry knife
18. b. Flat beater
19. High speed blending, pulping, mixing, or reducing of animal tissue, vegetables, or fruits.
20. a. Do not drop spoons, spatulas, or scrapers into machine while motor is on.
    b. Be sure lid is fastened tightly.
    c. Do not put very coarse foods or large pieces of ice in jar.
    d. Disconnect cord when machine is not in use.

ANSWER SHEET--UNIT VI-6

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

SUBJECT: Holding and Serving Equipment

1. b. order in which it will be placed on plate.

2. c. a temperature to hold food at 140° F. (60° C.)

3. a. immediately after the service is completed

4. b. 170° - 180° F. (76.6° - 82.2° C.).

5. a. Keeps food at proper storage temperature
   b. Preserves the range-fresh flavor
   c. Eliminates the waste of food

6. b. False

7. a. True

8. a. True

9. b. False

10. a. True

11. ice

12. detergent

13. e. Salad case

14. g. Thermal-tray system

15. d. Roll warmer

16. f. Thermal dish trays or plate holders

17. b. Hot and cold carts

18. a. Composition plate holder and dome cover

19. c. Infrared lamps

ANSWER SHEET--UNIT VII-1

LARGE EQUIPMENT FOR COOKING FOOD

SUBJECT: Toasters

1. a. the heating element which is insulated in a frame.
2. d. all of these.
3. a. a soft, damp cloth.
4. b. a non-abrasive cleaner.
5. c. electrical element.
6. c. disconnect it.
7. a. dry.
8. Wipe outside, remove crumbs, remove toast chutes, and clean base.
9. A non-abrasive cleaner.
10. a. Keep fingers away from elements when loading the toaster.
    b. Unplug toaster when not in use.

ANSWER SHEET--UNIT VII-2

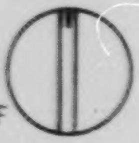
LARGE EQUIPMENT FOR COOKING FOOD

SUBJECT: Surface Cooking Equipment

1. Only until the food starts to cook.

2. Before turning on the burner valve.

3.



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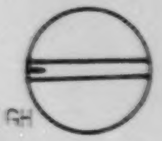

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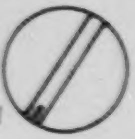


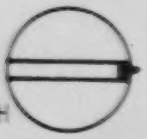
LOW

4. a. Ventilation
   b. Fire control
   c. The removal of smoke, grease, cooking vapors, and odors from the cooking area

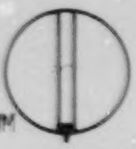
5. Seasoning is the build-up of shortening on the grill until a slick surface is formed.

6. Heat is brought to 300° F. (148.9° C.). A light film of unsalted shortening is spread over the grill with a clean, dry cloth. After 2 minutes the grill is wiped clean. The process is repeated until a slick surface is formed. Excess shortening is wiped off.

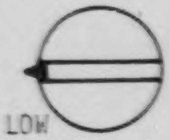
7.



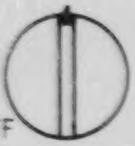
HIGH



MEDIUM



LOW



OFF

8. Meats, poultry, seafood, vegetables, and fruits.

9. The grid lever control.

10. 325° - 350° F. (162.8° - 176.7° C.).

11. Not more than half-full.

12. The food takes longer to cook. The food may become grease soaked and unappetizing.

13. French fried.

ANSWER SHEET--UNIT VII-3

LARGE EQUIPMENT FOR COOKING FOOD

SUBJECT: Ovens

1. a. Turn directional heat control switch to "Medium" or "High."
   b. Set the thermostat at the desired temperature.
   c. Let the oven preheat.

2. To prevent loss of heat and to produce a better product.

3. That it would not heat any faster with a high temperature setting.

4. Baking pies and bread.

5. Reconstitution oven.

6. 700° F. (371.1° C.).

7. individual

8. a. Glass
   b. Paper
   c. Ceramics

ANSWER SHEET--UNIT VII-4

LARGE EQUIPMENT FOR COOKING FOOD

SUBJECT: Steaming Equipment

1. Close and lock the door.

2. No. She should have waited until the steam was released to open the door, and she should have pulled the steam valve when she closed the door.

3. Lift the lid away from oneself so that steam does not scald hands, arms, or face.

4. Vegetables.

ANSWER SHEET--UNIT VIII-1

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Quality Food Preparation

1. a. She did not read the recipe carefully before she began.
   b. She did not check to see that she had the necessary equipment.
   c. She did not apply the terms in the recipe; she beat the mixture instead of stirring it.
   d. She did not make herself a time schedule.

2. a. He did not read the recipe carefully before he began.
   b. He did not check to see that he had all the necessary ingredients.
   c. He did not make the addition for Blueberry Muffins.
   d. He did not check to see that he had the necessary equipment.

3. a. The information in the recipe failed to:
      (1) state the number of servings.
      (2) give the cooking temperature.
      (3) use familiar cooking terms.

   b. The use of a standardized recipe aids in producing products of consistent quality each time the recipe is used. It also saves time since all necessary information is included.

4. The ingredients and steps are written in the order in which they are used.

ANSWER SHEET--UNIT VIII-2

TECHNIQUES OF FOOD PREPARATION

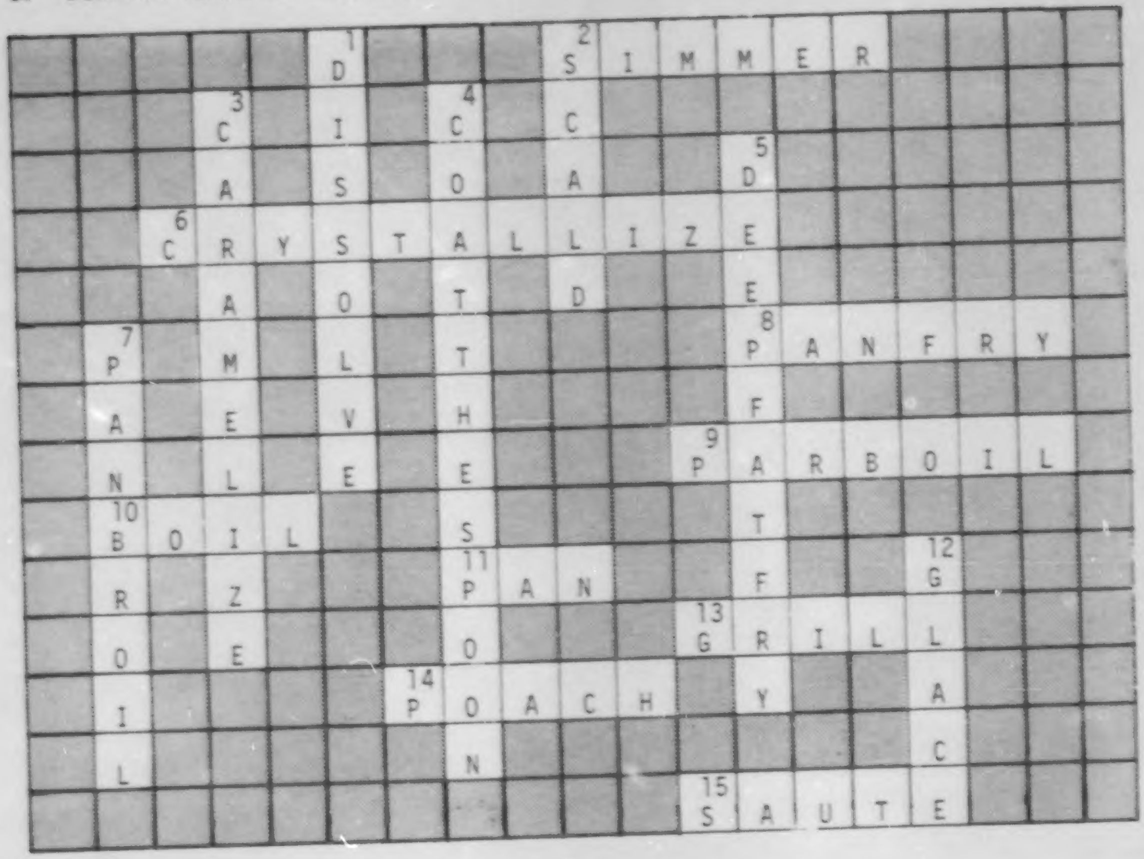
A. MEATS CROSSWORD PUZZLE

			1 M	A	2 R	I	N	A	T	3 E		4 F	R	I	5 C	A	S	6 S	E	E
					O					N		L			R			E		
		7 B	R	E	A	D				T		A			O		8 L	A	R	9 D
		O			S		10 S	E	A	R		K			O			S		I
		U			T					E		E			U			O		P
		I				11 B	A	12 S	T	E					E			N		I
13 F	I	L	E	T		A		M							T					N
		L				R		O						14 S	T	U	F	F		B
		O		15 G		B		T							E					A
		N		R		E		H		16 C			17 B							T
				I		C		E		R		18 B	R	A	I	19 S	E			T
				N		U		20 R	O	U	X		O			C				E
	21 D	R	E	D	G	E				M			I			O				R
								22 C	U	B	E		L		23 T	R	U	S	S	
																E				

B. SALADS, VEGETABLES, AND FRUITS CROSSWORD PUZZLE

				1 A	2 U	G	R	A	T	I	N		3 P	A	4 R	E			
					N								U		E				
					5 M	I	N	6 C	E				R		7 C	U	8 T		
					O			O		9 C	O	R	E		O		H		
		10 P	E	E	L			N		A			E		N		A		
		I			D			G		N					S		W		
		T						E		D		11 G	R	A	T	E			
				12 S		13 D		A		Y		A			I				
				14 C	H	I	L	L				R			T				
				A		C						N		15 H	U	L	L		
		16 J	U	L	I	E	N	N	E			I			T				
				L								S			E				
		17 C	H	O	P		18 B	L	A	N	C	H							
				P															

C. SURFACE COOKING CROSSWORD PUZZLE



					1 D				2 S	I	M	M	E	R				
			3 C		I		4 C		C									
			A		S		O		A			5 D						
		6 C	R	Y	S	T	A	L	L	I	Z	E						
			A		O		T		D			E						
	7 P		M		L		T					8 P	A	N	F	R	Y	
	A		E		V		H					F						
	N		L		E		E				9 P	A	R	B	O	I	L	
	10 B	O	I	L			S					T						
	R		Z				11 P	A	N			F			12 G			
	O		E				O				13 G	R	I	L	L			
	I					14 P	O	A	C	H		Y			A			
	L						N								C			
											15 S	A	U	T	E			

D. BAKING AND PASTRY CROSSWORD PUZZLE

	1 B					2 S				3 C							
	4 L	E	V	E	L	O	F	5 F		R							
	E					U		O		E					6 T		
	N					F		7 L	E	A	V	E	N		O		
	8 D	O	9 T			F		D		M					A		
			I			L						10 B	R	U	S	H	
			M		11 M	E	R	I	N	G	U	E			T		
			B									A		12 K		13 F	
			A							14 C	U	T	I	N		L	
	15 M	O	L	D										E		U	
			E									16 S	C	A	N	T	
									17 S			T		D		E	
						18 S	I	F	T			E					
						T			E			E					
						I			19 W	H	I	P					
						R											

ANSWER SHEET--UNIT VIII-3

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Convenience Foods

1. A partially prepared product or ingredient that requires less preparation at serving time.

2. (Any five of the following)
   Pre-cut portions of fish, meats, or poultry
   Frozen or canned fruits and vegetables
   Cleaned and packaged fresh chopped or shredded, peeled and cut fruit for use in salads, desserts, or as garnishes
   Cake and other baked-product mixes
   Soups, gravies and sauce bases
   Packaged individual portions of condiments and beverages

3. a. Freezing
   b. Freeze-drying
   c. Dehydration
   d. Canning

4. b. convenience food flow system.

5. a. regular food.

6. c. a lower priced food item.

7. b. 15 minutes.

8. d. food needed.

9. a. processed at the peak of nutritive value.

10. c. processing.

11. b. freezer and oven.

12. c. requires no inventory.

ANSWER SHEET--UNIT VIII-4

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Techniques of Portioning Food

1. that a specific size portion of each food is served

2. management of the food service operation

3. a. Type of meal served
   b. Food choices
   c. Serving methods
   d. Kind of customers
   e. Cost of food and supplies

4. (Any five of the following)
   Food service personnel might not request the correct amount of food and supplies.
   There may be large amounts of leftovers.
   Waste of food and loss of nutrients might increase.
   Food preparation would be more difficult.
   Customers may not be satisfied.
   The amount of time required for serving the plate would be increased.
   Servings might not be uniform.
   It would be difficult to establish selling price in relation to food cost.

5. a. Select the proper size and color serving dish.
   b. Use garnish.

6. (Any of the following)
   Sugar
   Pepper
   Salt
   Crackers
   Cereal
   Milk
   Ice cream
   Catsup
   Mayonnaise

7. c. Gelatin Salad

8. d. Ice cream

9. c. Gelatin Salad; e. Macaroni and Cheese Casserole

10. f. Meat

11. a. Bread; f. Meat

12. b. Cereal

ANSWER SHEET--UNIT VIII-5

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Work Simplification and Work Schedules

1. a. Plan and organize for the work to be done.
   b. Plan the job itself.

2. The job of making work easier to do in a shorter period of time.

3. a. Take the job apart; see how it is done.
   b. Change, eliminate, combine, or rearrange steps
   c. Plan the job, avoiding unnecessary waste.

4. Physical and mental fatigue.

5. Use your mental ability to find ways to use less energy.

6. Work is done easily and quickly.

7. a. Get ready (set up equipment).
   b. Do (actual production);
   c. Put away and clean up.

8. a. Rule 1 or 2. Left hand places lettuce; right hand places peach halves. Move arms simultaneously and in opposite and symmetrical directions.
   b. Rule 4. Use touch of a finger.
   c. Rule 3. Use a continuous circular motion.
   d. Rule 7. Use momentum or gravity to do work whenever possible.
   e. Rule 8. Have tools, utensils, and materials within the normal maximum reach area.

9. Gelatin salad would be prepared first because it needs time to set. The potato salad would probably be prepared second.

10. a. True

11. a. True

12. b. False

13. b. False

14. b. False

15. a. True

16. a. True

ANSWER SHEET--UNIT IX-1

COLD FOOD WORK STATION

SUBJECT: Beverages

1. a. level standard measurements.

2. c. steady, circular motion.

3. b. 185° F. (85° C.)

4. a. fresh, cold water.

5. a. Underbrewing, results in coffee that is watery in appearance and taste.
   b. Overbrewing results in a bitter taste and a cloudy or muddy appearance.

6. a. Clear.
   b. Mild in flavor.
   c. Free from leaves.

7. It becomes bitter.

8. Tea is made properly by pouring fresh boiling water over tea leaves, and allowing the tea to steep for 3 to 5 minutes.

9. a. Rich chocolate flavor.
   b. Light to dark brown color.
   c. No sediment.
   d. Consistency of light cream.

ANSWER SHEET--UNIT IX-2

COLD FOOD WORK STATION

SUBJECT: Salads

1. To add variety, color, crispness, and flavor and to provide vitamins and minerals to the diet

2. a. Tossed green salads
   b. Meat, fish, poultry, and egg salads
   c. Vegetable salads
   d. Fruit salads
   e. Molded or gelatin salads
   f. Frozen salads

3. To prepare lettuce, hold with the core toward counter, hit the core end sharply on the counter, twist the core to remove. To clean and separate the leaves, run water into the area where the core was removed.

4. Enclose them in a plastic bag with a small amount of ice and refrigerate them for a few minutes.

5. Dip these fruits into an acid solution after peeling and slicing.

6. 1. Collect tools and equipment needed.
   2. Assemble prepared ingredients from refrigerator and place on work surface.
   3. Position trays on work surface.
   4. Place plates on trays.
   5. Arrange salad greens in plates on tray nearest you.
   6. Place salad foods, etc. in center of salad greens using correct size scoop for portioning.
   7. Check to be sure portions are uniform.
   8. Garnish each salad.
   9. Place completed tray onto serving cart or into refrigerated unit as directed.
   10. Repeat process until all trays of salads are completed.
   11. Clean work area; store tools and equipment.

7. a. Use vegetables shortly after they have been cooked or chilled.
   b. Do not soak vegetables for a long period of time.

8. e. all of these.

9. c. chicken salad.

10. c. Carrot-raisin salad

11. b. French

12. d. Mayonnaise

13. a. Cooked

14. c. Cream

15. a. Cooked

ANSWER SHEET--UNIT IX-3

COLD FOOD WORK STATION

SUBJECT: Sandwiches

1. a. A crisp garnish.
   b. 2 oz. or 3 Tb. of filling.
   c. The filling should reach the edge of bread, but should not spill out over the edges.
   d. Edges should be cut evenly, not ragged.
   e. Spread the bread with margarine or softened butter.

2. a two-stroke technique.

3. a. No higher than three sandwiches
   b. A moisture-proof wrap paper.

4. $14.50

5. a. Miniature garnished sandwiches in fancy shapes and assorted flavors.
   b. (Any three shapes from page 396 in the reference.)

6. Several spreads are placed on lengthwise slices of bread. The crusts are removed and the loaf is frosted with softened cream cheese and then decorated.

7. a. Size and ingredients suited to the occasion
   b. Well-seasoned filling spread to the edges
   c. Firm-textured body
   d. Appetizing flavor
   e. Attractive garnishes and accompaniments

ANSWER SHEET--UNIT IX-4

COLD FOOD WORK STATION

SUBJECT: Garnishes and Condiments

1. The finishing touches used on foods to make them more attractive.

2. a. To add color to the plate of food.
   b. To add flavor to the food.

3. a. An odd number of garnishes is better than an even number.
   b. Colors and textures of garnishes should contrast with the food on which they are used.
   c. Artificial colors should be used with care.

4. No, not unless they can be easily seen.
   It is possible a guest may bite into the toothpick and injure himself.

5. A seasoning for food, such as a sauce or a relish.

6. (Any of the items listed on p. 130 in the reference or those listed in the lesson.)

ANSWER SHEET--UNIT X-1

HOT FOOD WORK STATION

SUBJECT: Milk, Milk Products, and Eggs

1. The smaller size could be used, since they are less expensive and are mixed together rather than served cooked alone, as a poached or fried egg.

2. In a fluffy omelet the egg whites and yolks are separated and beaten instead of being mixed together as in the plain omelet. The plain omelet is cooked entirely over direct heat. The fluffy omelet is partially cooked over direct heat and finished in an oven.

3. High heat toughens and hardens eggs.

4. Custards: c. Coloring; e. Leavening; f. Thickening
   Mayonnaise: c. Coloring; d. Emulsifying
   Breaded fried fish: b. Coating
   Yellow cakes: c. Coloring; e. Leavening
   Souffles: e. Leavening
   Meat loaf: a. Binding

5. 1. Eggs whip more easily and have better volume at room temperature.
   2. Use a bowl with a small bottom and sloping sides for better results.
   3. Do not allow any of the yolk to get into the egg whites.

6. Cheeses, cream, butter, etc.

7. Moderate temperatures and a short cooking period.

8. Stir while heating or cover after heating.

9. Beat the mixture with a rotary or electric mixer.

10. b. Dried milk

11. Thicken the milk or the tomatoes with starch before combining the two ingredients.

12. a. Cream should contain at least 25 per cent butterfat.
    b. Cream and utensils should be chilled.
    c. Whip rapidly but stop whipping before butter begins to form.

13. The cheese becomes tough and stringy, and the fat separates from the cheese.

ANSWER SHEET--UNIT X-2

HOT FOOD WORK STATION

SUBJECT: Vegetables

1. d. Spinach

2. b. Cabbage; e. Turnips

3. c. Potatoes

4. a. Dried beans; f. Rice

5. a. Cook carefully to retain their delicate flavor.
   b. Cook to reduce the strong flavor.
   c. Cook starch without losing other qualities.
   d. Cook in large quantity of water.

6. c. 1 tablespoon of salt in 1 gallon of water.

7. a. placing them in ice water.

8. a. uncovered.
   b. low temperatures.
   c. large.
   d. long period of time.

9. Steaming.

10. Boiling.

11. They need to be well dried.

12. Frozen vegetables need no cleaning and therefore save time in preparation.

13. Root vegetable.

14. Combine the vegetable in a souffle or pudding or bake in a sauce.

15. Do not soak vegetables for a long period. Cook them in a small amount of water.

16. Baking soda.

17. The color changes to a pinkish brown, and a strong unpleasant flavor develops.

ANSWER SHEET--UNIT X-3

HOT FOOD WORK STATION

SUBJECT: Cereals and Pastas

1. (Any four of the following)
   Flours
   Meals
   Breakfast cereals
   Rice
   Pastas

2. A food made from a flour paste.

3. a. spaghetti
   b. noodles
   c. macaroni

4. Not completely tender. There is still some resistance when the product is chewed.

5. a. Combine the cereal with cold liquid and then bring the mixture to the boiling point.
   b. Sprinkle the dry cereal into rapidly boiling water, then cook until done.

6. Soft texture, no lumps
   Pleasant flavor
   Original shape but greatly enlarged

ANSWER SHEET--UNIT X-4

HOT FOOD WORK STATION

SUBJECT: Soups and Sauces

1. Meat, bones, and often vegetables are simmered in water for several hours.

2. Strain the stock through several layers of cheesecloth. Add slightly beaten egg whites and egg shell to the stock. Heat to boiling; let stand. Remove the scum and strain through cheesecloth again.

3. Add the hot vegetables to a hot cream sauce very slowly, just before serving.

4. Consomme is highly seasoned and flavored; bouillon is not.

5. A cream soup is thickened with a white sauce. A chowder is thickened with vegetables and fish.

6. a. Pleasing color
   b. Satisfying flavor
   c. Appetizing aroma
   d. Consistency in keeping with the type of soup
   e. No free fat floating on the top

7. A thickening agent made from fat and flour.

8. Gravies and sauces.

9. A roux is added to meat juices and cooked until the starch of the flour is thoroughly cooked and the gravy is thick and smooth.

10. Cornstarch and eggs.

11. Melt fat, add flour, and stir to make a smooth mixture. Add milk and stir to blend. Heat over low heat in a double boiler, stirring occasionally until thickened. Add seasonings.

ANSWER SHEET--UNIT X-5

HOT FOOD WORK STATION

SUBJECT: Meats, Poultry, and Seafood

1. The distribution of fat cells in the connective tissue of meat.
2. By slowly cooking the pork for a long period until the meat is well done.
3. That the meat came from a healthy animal and from a packing plant under continuous supervision.
4. a. To keep meat from becoming tough.
   b. To retain a juicy texture because of less shrinkage.
   c. To obtain a desirable flavor and color.
5. Dry heat methods such as roasting, broiling, pan-broiling, and frying.
6. Place the meat thermometer in the thickest part of the meat, making sure it does not touch the bone.
7. Meats shrink less and are more juicy. Meats are more evenly cooked. Meats have a more uniformly browned exterior.
8. The moist heat or steam acts on the connective tissue of the meat to change it to softer material.
9. When stewing, the meat is entirely covered with liquid; but when braising, the meat is placed on a trivet to keep it out of the liquid.
10. Broiling, frying, barbecuing, roasting.
11. Salads, casseroles, sandwiches, and creamed dishes.
12. The drumsticks and wing joints move easily.
13. The product becomes tough and loses flavor.
14. It is an opaque white color and flakes easily.
15. The flavor of the fish is transferred to the fat; and when other foods are fried in the fat, they absorb the fish flavor.

ANSWER SHEET--UNIT XI-1

BAKE WORK STATION

SUBJECT: Desserts

1. Pour an acid such as a citrus juice over the cut surfaces of the fruits.

2. a. They are low in cost.
   b. They require little preparation time.
   c. A variety of products can be made from basic recipes.

3. a. Separate the cornstarch or tapioca grains with a small amount of cold liquid.
   b. Mix the dry starch with the sugar or cocoa ingredients used in the recipe.

4. a. Bavarian cream. Add softened ice cream or a mixture of fruit juice, whipped cream, and beaten egg whites to a whipped commercial gelatin mix.
   b. Spanish Cream. Add beaten egg whites folded into a custard base that has been partially set with gelatin.
   c. Fold whipped cream or whipped toppings into a gelatin mixture before it is set.

5. The batter for crepes does not contain a leavening agent and is very thin or watery in consistency.

6. A batter flavored with fruit that is deep-fried.

7. A sherbet contains milk, gelatin, or beaten egg white and is firmer and finer in texture than an ice or frappe.

ANSWER SHEET--UNIT XI-2

BAKE WORK STATION

SUBJECT: Cakes, Cookies, and Pastries

1. butter

2. sponge; foam

3. a. In the conventional method, the sugar, fat, and eggs are creamed together; then the dry and liquid ingredients are added alternately in 3 or 4 parts. In the quick method, the dry ingredients are sifted into a bowl, the shortening and part of the milk are added, and the mixture is beaten for 2 minutes. The remaining milk and the eggs are then added, and the mixture is beaten again.
   b. No, because each method requires different proportions of ingredients.

4. a. The batter extends over the edge of the pan, making the cake hard to remove.
   b. The layer is flat and skimpy, and the color is pale.

5. b. False

6. The product is coarse-grained.

7. a. An even grain and fine texture
   b. A velvety crumb
   c. A good volume
   d. A symmetrical, lightly browned exterior
   e. An excellent keeping quality

8. Cookie dough usually contains more fat and eggs and less liquid and leavening than cake batter.

9. a. Drop cookies
   d. Bar cookies
   e. Refrigerator cookies

10. a. The cake should be cooled before being frosted.
    b. Excess crumbs should be brushed off the cake.
    c. The top layer must be placed straight on the lower layer.
    d. The top of the lower layer should be frosted first; then the sides of both layers; and lastly, the top of the cake.
    e. Bold, firm strokes that strive for swirls and ridges should be used.

11. all-purpose flour or pastry flour.

12. Cold.

13. For flakiness, cut the shortening into the flour with a pastry blender or for tenderness, with a knife. Keep the mixing time to a minimum. Handle the dough carefully and chill before rolling. For lightness, bake at the correct temperature.

14. Mealy, but tender.

15. Wafer, graham cracker or cereal crumbs, butter or margarine, and sugar.

16.
  a. 425° F. or 218° C. for 10-12 minutes.
  b. 450° F. or 232° C. for 10-15 minutes, then finish at 400° F. or 204° C. Total length of time depends on the filling.
  c. 375° F. or 190° C. for 10 minutes or until firm.

17.
  a. Tender, flaky, light texture
  b. Good flavor
  c. Blistered appearance
  d. Lightly browned color
  e. Texture that cuts easily with a fork

18. Build up the edge of the pie crust to hold in the juices.

19. To keep the crust from becoming soggy.

20. (Any four of the following)
  Meringue
  Grated or sliced cheese
  Whipped cream
  Ice cream
  Pastry cut into strips or special shapes

21. Muffin pans.

ANSWER SHEET--UNIT XI-3

BAKE WORK STATION

SUBJECT: Breads

1. A quick bread is leavened quickly; a yeast bread is leavened slowly.

2. a. Pour batter--has the consistency of cream, is thin enough to pour.
   Examples: pancakes, waffles, popovers.
   b. Drop batter--thick enough to be dropped from a spoon.
   Examples: muffins, drop biscuits.
   c. Soft dough--can be handled and kneaded lightly.
   Example: rolled biscuits.

3. Baking powder and salt.

4. When a liquid is added to flour, the protein particles of the flour swell and come in contact with each other to form a mass called gluten. Gluten is necessary to form a dough. It creates the framework of a baked product.

5. The substance used to make foods light and porous.

6. a. Baking powder
   b. Baking soda
   c. Air
   d. Steam

7. Steam forms and expands when heated, causing the product to rise.

8. a. Beating egg whites
   c. Beating a batter or dough
   d. Creaming shortening

9. a. fat; c. sugar

10. The product will be tough and have a coarse texture.

11. Dry ingredients should be added first and last to prevent curdling.

12. These flours can develop the gluten needed for the framework of the bread.

13. Yeast feeds on starches and sugars and produces carbon dioxide gas that raises the product.

14. 10 Baking
    4 Punching
    7 Molding
    2 Kneading
    5 Scaling and Rounding
    1 Mixing
    8 Panning
    3 Fermenting
    6 Resting
    9 Proofing

15. a. Sugar.
    b. Sugar adds flavor and aids in the formation of a well-browned crust.

16. To distribute the yeast, remove excess carbon dioxide, and improve the texture of the bread.

17. To distribute the yeast and aid in the development of the gluten.

18. The dough is fully proofed when small dents made in the dough slowly fill back out.

19. a. Tender and crisp
    c. Moderate thickness
    d. Even color, not spotted

20. a. Even color, without streaks or spots
    b. Evenly distributed, fine-celled grain
    c. Soft, moist, springy texture

ANSWER SHEET--UNIT XII-1

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Preparing the Table

1. a. In the kitchen.
   b. Fast, inexpensive, easily learned by inexperienced waiters and waitresses.
   c. From the left side with the left hand.
   d. From the right side with the right hand.

2. All food is served from a special cart or wagon fitted with gas or electricity, and the final cooking is done in view of the guests.

3. Plates are already on the table at each guest's cover. Food is served by a waiter, using his right hand, from a silver serving platter held in his left hand. Service is clockwise around the table, starting with the host.

4. The space for one person which is set with silver, china, glassware, and linen.

5. a. right
   b. left
   c. right
   d. left
   e. right
   f. right
   g. left
   h. right

6. (Any four of the following)
   Type of function
   Number of guests
   Type of service to be used
   Amount of equipment and number of waiters or waitresses needed
   Shape of the room
   Whether a head table is used

7. (Any two of the arrangements shown on p. 269 in the lesson)

ANSWER SHEET--UNIT XII-2

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Meeting the Public

1. Be friendly and courteous, but not familiar.
   Be helpful, but not overbearing.
   Be gracious--don't act as if you are too busy, too tired, or too lazy to attend to the customer's needs.
   Be observant and attentive to each customer's needs.
   Be tolerant of another's behavior. Don't take the behavior of a guest personally.
   Don't allow personal problems to interfere with serving your customer.

2. High standards help get rid of germs.

3. (Any six of the following)
   Wear a clean uniform.
   Wash hands frequently.
   Don't wear jewelry or nail polish.
   Keep nails short and clean.
   Brush teeth.
   Take daily baths.
   Wear clean undergarments.
   Wear a net or cap to cover hair.
   Shampoo hair frequently.
   Use an antiperspirant.
   Work only when free of disease or illness.
   Don't smoke in kitchen or dining areas.

4. Decide on appropriate table.
   Lead guest to the table.
   Seat women so they face the dining room.
   Present the menu to the woman first; or if a group, to the person on the right of the host and then counterclockwise around the table.

5. Offer your arm and guide him to a convenient table. Move to one side anything on the table that might be overturned easily.

ANSWER SHEET--UNIT XII-3

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Writing and Placing Orders

1. When he puts the menu down or gives a signal.

2. Stand erect and at a reasonable distance from the table.

3. a. True

4. Mentally number the chairs at the table and always start with the person in the number one position.

5. a. "How do you want your meat? Well done, medium, or rare?"
   b. "What type of dressing do you want on your salad?" (Name the dressings available.)
   c. "Would you prefer mashed, French fried, or baked potato?" (or whatever is available.)
   d. "What beverage do you prefer?"
   e. If coffee, "Would you like it now or later?"

6. Appetizers and soups, entrees, desserts, and beverages

7. A menu on which items are separately priced and which is seldom changed

8. a. Turkey cut in thin strips
   b. Pieces of lobster meat served in a sauce made of cream, thickened with egg yolks, and flavored with sherry
   c. Dessert with crust made of lady fingers with a whipped cream or custard gelatin filling
   d. Pieces of stewed chicken served with a white sauce
   e. Potatoes baked with a sauce and cheese
   f. A sauce made of melted butter, egg yolks, lemon juice, and seasonings
   g. A sundae with a peach and rasberry sauce
   h. Mushrooms cooked in a small amount of fat

9. Impressions made by telephone conversations may determine whether a person patronizes your food service establishment.

ANSWER SHEET--UNIT XII-4

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Serving Customers

1. From the guest's left.

2. Present the platter to the guest from his left. Be sure that the serving utensils are on the right side of the platter with handles toward the guest.

3. a. To the left of the forks.
   b. In the center of the cover.

4. To the right of the spoons, with the cup handle to the right.

5. By serving foods as soon as they are prepared.

6. Last.

7. 4 Serve the entree
   1 Fill water glasses
   3 Remove first course dishes
   2 Serve the appetizer
   5 Remove main course dishes
   7 Serve dessert
   6 Place silverware needed for dessert
   8 Refill coffee cups

8. a. 5, 6, and 7 o'clock position and put the greatest weight on the shoulder.
   b. in the center of the tray.
   c. between the center of the tray to 3 o'clock, with the spouts facing inward.
   d. balanced.

9. So that the entree is closest to the customer.

10. Serve guests on right with left hand and guests on left with right hand.
    Serve the guest next to the wall first and then the guest at the end of the booth.
    If a guest starts to reach for the food, stop and allow him to take it.
    Let customers know you are about to reach across the table so that they can refrain from any sudden movements that might cause spills.
    Pick up beverage glasses or cups to refill them if they are hard to reach.

11. Counter service is quicker and less formal. More easy-to-prepare meals, short orders, pre-packaged foods, and fountain items are served.

12. Food prices are usually moderate in a cafeteria, and if large portions are served repeatedly, over a period of time, a great deal of money can be lost by the business.

13. Arrangement of the colors in a more attractive and harmonious manner.

14. So they can make menu suggestions to customers and answer customers' questions to keep the line moving and the service quick and efficient.

15. Often runners or supply workers are employed who transfer the information from the serving line to the kitchen. Sometimes an intercommunication system is used.

ANSWER SHEET--UNIT XII-5

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Fundamentals of Bus Service

1. (Any four of the following)
   Slow service
   Discourteous, impolite employees
   Unsanitary handling of food, dishes, silver
   Soiled garments on employees
   Poorly groomed employees
   Dirty floor, woodwork, or furniture (dining area)

2. b. Report it to the manager.

3. a. Directing customers to tables.
   b. Carrying customers trays to tables and possibly transferring food to dining table.
   c. Bringing condiments and cooked-to-order foods to guests.
   d. Placing the order, correcting the sales check, and returning the check to the guest when he requests extra food.

4. (Any three of the following)
   Don't stack dishes too high or in a careless manner.
   Be careful not to slide or rub plates together.
   Separate silver from garbage so that it isn't accidentally thrown away.
   Don't try to carry too much at once.

5. Pick up utensils by their handles.
   Use tongs, spoons or the appropriate utensil to pick up ice, condiments, food, etc.
   Pick up glasses by the base, plates by the rims.
   Wash hands frequently, especially after handling dirty dishes and before handling food or clean dishes.
   Be clean and well-groomed at all times.

ANSWER SHEET--UNIT XII-6

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Handling Money

1. Place the check face down to the left of the host, thank him, and indicate he is to pay the cashier.

2. Take the credit card and check from the guest. Stamp the credit slip and fill in the charges. Return the slip to the customer for him to sign and add a tip if he desires. Check the signature on the card with that on the slip. Return the credit card to the guest and invite him to return again.

3. Always lay the money received on the ledge of the cash register until after the customer receives his change. Then put it in the cash register.

   a. The penny reduces the check to $1.75, with a quarter returned to the customer.

   b. Say $3.15 out of $5.00. Give a dime saying $3.25, a quarter saying $3.50, another quarter saying $3.75, another quarter saying $4.00, and a one dollar bill saying $5.00.

   c. Say $6.83 out of $10.00. Give 2 pennies saying $6.85, a dime $6.95 and a nickle saying $7.00. Then count three one dollar bills saying $8.00, $9.00, and $10.00.

   d. Say $17.94 out of $20.00. Give a penny syaing $17.95, and a nickle saying $18.00. Count two one dollar bills to the customer saying $19.00, and $20.00.

ANSWER SHEET--UNIT XII-7

CUSTOMER SERVICE TECHNIQUES

SUBJECT: Sidework and Closing Duties

1. Wipe the outside of the shakers with a damp cloth and polish with a dry one. Rice may be added to salt shakers to prevent dampness of the contents. If the openings in the cap are clogged, clean them with a toothpick.

2. If containers have hard lumps of sugar, they should be emptied, washed, dried, and refilled. Check to be sure that the screen tops of the shaker containers are fastened securely and that the spouts are clean and unclogged.

3. Check to see that there is an adequate supply of all items and check to see that the warming unit works properly.

ANSWER SHEET--UNIT XIII-1

PROCEDURES FOR STOREROOM CONTROL

SUBJECT: Receiving and Issuing Procedures

1. receiving clerk.

2. (Answer should include most of the following)
   Count, check, or weigh produce as it is received.
   Store cases on pallets as directed.
   Open cartons and place items on shelves.
   Refrigerate fresh produce.
   Receive requisitions from work areas.
   Weigh and portion supplies as requisitioned.
   Deliver to stations at specified times.
   Clean shelves, floor, and equipment.

3. a. manager.

4. a. Name of vendor
   b. Date received
   c. Description of items
   d. Quantities of weights received

5. a. 12 lb. ground black pepper
   b. 60 doz. large eggs
   c. 400 lb. all-purpose flour
   d. 36 #1 cans sliced apple
   e. 100 lb. Irish potatoes
   f. 50 lbs. onion

6. c. Check with the food service supervisor to determine the proper procedure before accepting the delivery.

   Possible reasons include:
   (1) Some action might need to be taken before the bread delivery is accepted.
   (2) The food service supervisor or other persons in charge of checking the items for quality should be notified when the delivery is inferior.
   (3) It is not Betty's responsibility to notify the supplier.

7. a. Have some knowledge of food.
   b. Be able to keep complete and accurate records.
   c. Be able to accurately check invoices or delivery slips against the items received.
   d. Be trustworthy.
   e. Be able to maintain daily receiving records.

8. Issuing supplies that are never sold in the food service business causes the business to lose money.

ANSWER SHEET--UNIT XIII-2

PROCEDURES FOR STOREROOM CONTROL

SUBJECT: Storage of Food and Supplies

1. a. Place new stock in front of old stock.
   Reason: Old stock should be used before new stock.

   c. Place food in walk-in refrigerator close together.
   Reason: Foods should be stored with space between them to allow for circulation of air.

2. It is easier for kitchen personnel to find them quickly.

3. Egg cartons should be cross stacked for good air circulation and stored away from foods that have strong odors in an area of the refrigerator where they will not freeze.

4. Fish should be packed in cracked ice and stored away from foods that absorb strong odors.

5. At the end of each week or month.

6. To determine what needs to be reordered and to determine food costs.

UNIT TESTS

UNIT I TEST

WHAT IS A FOOD SERVICE EMPLOYEE?

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. Self-evaluation is
   a. unnecessary if conferences are held with one's employer.
   b. recommended primarily for beginning employees.
   c. a means of improving work habits and attitudes.

_____2. The opportunities for trained personnel in the food service industry are
   a. slowly expanding.
   b. rapidly expanding.
   c. decreasing.

_____3. Generally food service employees at the entry level are not expected to
   a. work primarily in and between the serving area and dishwashing section of the kitchen.
   b. assist in food preparation.
   c. make out orders for supplies.

_____4. Keeping the food service establishment clean and sanitary is the responsibility of
   a. all employees.
   b. the employers.
   c. the employees who are assigned cleaning duties.

Which of the types of behavior described in Items 5 through 7 would lead to success as a food service employee?

Write a in the blank provided if you would recommend the behavior.
Write b in the blank provided if you would not recommend the behavior.

_____5. During the first week as assistant in the pastry department, Pat was enthusiastic about her work. As the weeks passed, her tasks became routine and she spent a lot of time chatting with the other employees to add interest to her job.

_____6. Mary does a good job in the salad department and can be depended upon to do the work assigned. When she does not agree with the directions she is given, she tells the supervisor how it should be done.

_____7. Jane's co-worker is rather slow, so Jane sometimes helps her finish a job, even though this is not part of her assignment.

UNIT II TEST

SANITATION

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. When using a dishwashing machine,
a. you do not need to scrape dishes before putting them through the machine.
b. utensils (knives, forks, and spoons) should not be piled in layers in the machine baskets.
c. the rinse water should be held between 150° and 170° F. (65° and 77° C.).

_____2. Dish towels should not be used for drying dishes because this practice
a. increases costs.
b. takes longer.
c. is unsanitary.

_____3. A general rule to remember when storing perishable foods is to keep foods
a. at temperatures that will prevent spoilage.
b. at room temperature.
c. in original containers.

_____4. Food-borne disease is a general term used to describe
a. diseases caused by foods.
b. any food that has been exposed to moisture and warm temperature for several hours.
c. any illness caused by taking contaminated food or drink into the body.

_____5. Three major "food germ criminals" are
a. salmonella, bacteria, and ptomaine.
b. botulism, salmonella, and staphylococcus.
c. bacteria, botulism, and staphylococcus.

_____6. What harmful germ is usually found in meat, eggs, poultry, milk, and milk products?
a. Salmonella
b. Ptomaine.
c. Streptococci.

_____7. The temperature range during which bacteria grow most rapidly is
a. 20° to 40° F. (-7° to 5° C.).
b. 40° to 140° F. (5° to 60° C.).
c. 140° to 180° F. (60° to 82° C.).

_____8. Which of the following foods becomes easily contaminated in a short period of time?
- a. Foods high in fat content.
- b. Foods high in sugar content.
- c. Foods high in protein content.

_____9. At what temperatures must food be stored to halt or slow the growth of bacteria?
- a. Above 140° F. (60° C.) and below 40° F. (5° C.).
- b. Above 100° F. (38° C.) and below 0° F. (-18° C.).
- c. Above 170° F. (77° C.) and below 50° F. (10° C.).

____10. One of the main divisions of the U.S. Department of Health, Education, and Welfare which sets up model sanitation codes is the
- a. Texas Department of Health.
- b. Department of Agriculture.
- c. Food and Drug Administration.

____11. Which of these is a goal of sanitation procedures in food service establishments?
- a. Prevention of food spoilage.
- b. Preparation of high quality food.
- c. Service of food at the proper temperatures.

____12. The term "sanitizing" differs from cleaning in that sanitizing indicates the
- a. absence of soil.
- b. removal of harmful bacteria.
- c. use of a detergent.

____13. Failure to clean equipment properly results in
- a. poor quality food products.
- b. improper functioning of equipment.
- c. both a and b.

____14. When cleaning concrete floors, you should use
- a. steel wool and a cleaning solution to remove heavy soil.
- b. a solution of neutral soap suds to scrub the floor.
- c. an oil mop to sweep the floor.

____15. Which of the following would be least important when cleaning tables and chairs?
- a. Check for remaining sticky spots on the table.
- b. Wipe tables daily with a cloth dipped in sanitizing solution.
- c. Polish the chairs and tables once a week.

____16. The most common pests found in food service establishments are
- a. beetles, weevils, mites, and meal moths.
- b. roaches, flies, ants, and rodents.
- c. roaches, weevils, ants, and flies.

____17. Pests are eliminated from storage and food service areas by
- a. pest control measures taken on a regular basis.
- b. proper sanitation and good housekeeping practices.
- c. both a and b.

Which of the practices in Items 18 through 25 might lead to food contamination or poisoning?

Write a in the blank provided if the practice is sanitary.
Write b in the blank provided if the practice is unsanitary.

____18. Jim reported to work even though he had a deep cough, since the number of employees at his training station was limited.

____19. Sarah used her hands to put the rolls on the serving tray.

____20. Fernando held the glasses near the bottom as he filled them.

____21. Jill had just shampooed and set her hair, so she did not wear her cap that afternoon.

____22. After using a spoon for tasting the pie filling, Thelma put the spoon in the sink.

____23. Greg made the chicken salad and stored it in the refrigerator until just before serving time.

____24. Maria served some left-over custard which had been stored in a warm place for several hours.

____25. After Sam cut his finger, he washed his hands with soap and water and went back to work.

UNIT III TEST

SAFETY

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. Which of the following statements about safety is true?
  a. All accidents could be eliminated.
  b. Accidents due to unsafe conditions could be eliminated.
  c. Accidents due to unsafe acts could be eliminated.

Would each of the types of accidents described in Items 2 through 7, be caused by unsafe acts or unsafe conditions?

> Write a in the blank provided if the accident is a result of unsafe acts.
> Write b in the blank provided if the accident is a result of unsafe conditions.

_____2. James received a shock when he touched an electrical cord before drying his hands.

_____3. While washing dishes in the sink, Betty cut her hand on a paring knife.

_____4. The rung of a stepladder broke when Joe was reaching for some canned food in the storeroom.

_____5. Jill slipped and fell on some spilled food behind the cafeteria counter.

_____6. Juanita was burned when she hit the handle of a pan which was turned toward the outside of the range.

_____7. Armondo was burned when steam escaped from a leak in the steam table.

Write the letter(s) of the kind of fire extinguisher you would use for the types of fires listed in Items 8 through 14.

TYPES OF FIRES

_____ 8. Paper
_____ 9. Paint
_____10. Electrical
_____11. Cleaning rags
_____12. Grease
_____13. Wood
_____14. Oil

FIRE EXTINGUISHERS

a. Carbon-Dioxide
b. Dry Chemical
c. Foam
d. Gas Cartridge
e. Pressurized Water
f. Soda-Acid
g. Vaporizing Liquid

UNIT IV

NUTRITION

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. Which of the following statements is true in regard to a fad diet?
a. A fad diet is based on information that has scientific support.
b. A fad diet is not based on sound nutrition.
c. A fad diet provides the dieter with necessary nutrients.

_____2. Many factors influence eating behavior. Which of the following statements is true?
a. A person will not eat to overcome unhappiness or nervousness.
b. Food cannot serve as a substitute for security or love.
c. Emotional stress will cause a person to eat.

_____3. A factor which does not contribute to the food habits and customs of families is their
a. ethnic groups.
b. nutritional needs.
c. economic levels.

_____4. The Basic Four food groups consists of
a. milk, meat, vegetables, and fruit.
b. milk and cereal, vegetables and fruit, meat, and bread.
c. milk, meat, vegetables and fruit, bread and cereal.

_____5. The recommended servings of milk needed for teenagers to meet their daily requirements include
a. 4 or more 8 oz. cups.
b. 3 or more 8 oz. cups.
c. 2 or more 8 oz. cups.

_____6. The recommended servings of meat to meet daily requirements include
a. 1 serving.
b. 2 or more servings.
c. 2 to 3 oz.

_____7. Some good sources of vitamin C are
a. citrus fruits.
b. fish liver oils.
c. green, leafy vegetables.

_____8. Which of the following is not a function of vitamin A?
a. Helps eyes adapt to darkness.
b. Promotes unblemished skin.
c. Helps in the clotting of blood.

____9. The essential nutrients needed by the body are
a. proteins, carbohydrates, and vitamins.
b. proteins, carbohydrates, fats, vitamins, and minerals.
c. proteins, vitamins, and minerals.

____10. Amino acids, essential for life and body growth, are found in complete proteins such as
a. Corn, navy beans, peas, cereal grains, and gelatin.
b. milk, eggs, cheese, meat, fish, and poultry.
c. meat, poultry, fish, cereal grains, peas, and navy beans.

____11. Water is an important food element. Which of the following statements about water is not true?
a. The average person needs 6 to 8 glasses of water daily.
b. Need for food is more important than for water.
c. About 3/4 of the body weight is water.

____12. Which of the following is not true about the requirements for the diet of a pregnant woman.
a. Include more milk and iron-rich foods in the diet.
b. Requirements are the same as the diet for her family.
c. The diet may include vitamin or mineral supplements.

____13. An important factor to remember when a child is learning to feed himself is to
a. stress good eating habits.
b. emphasize spills and accidents.
c. have patience and maintain control.

____14. When planning meals for teen-agers, you should consider the fact that
a. a teen-age girl needs more iron-rich foods than a teen-age boy.
b. overweight teen-agers need the same amount of foods as other teens.
c. the energy needs of a teen-age girl are the same as a teen-age boy.

____15. Which of the following statements does not apply to the nutritional problems of an adult?
a. A person should maintain his normal weight at age 25 for the rest of his life.
b. A diet guideline to follow is "add more calories as one adds more years."
c. Adults require less calcium and protein than adolescents.

____16. Which of the following problems might you encounter in working with senior citizens?
a. A difference in basic nutritional requirements.
b. Maintaining a high calorie intake.
c. A lack of interest in food.

____17. The food service employee should understand the principles of meal planning because

a. meal planning is one of the duties of the food service employee.
b. diners in restaurants or institutions may ask for suggestions when selecting their food.
c. the training sponsor will ask for advance menu plans.

____18. To make the job of meal planning easier, you should not

a. ignore foods on hand in the storeroom and in the refrigerator.
b. review the menus for the past week.
c. consider foods that are available according to the season.

____19. Modified diets are diets in which

a. the patient's food preferences are added to the general diet.
b. substitutions are made to the general diet because selected foods are not available.
c. prescribed substitutions are made to the general diet.

____20. Some food service establishments use cycle menus which

a. end advance menu planning.
b. save time in menu planning.
c. can be used over and over without change.

UNIT V TEST

SMALL EQUIPMENT FOR FOOD PREPARATION AND SERVICE

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. The part of a dipper which measures the food is called the
   a. bowl.
   b. vane.
   c. lever.

_____2. Which of the following is not true in regard to cleaning a dipper?
   a. Wash in warm detergent water.
   b. Rinse in water with an added disinfectant.
   c. Dry with a towel.

_____3. What is the relationship between the number of servings and the number of the dipper size?
   a. The number of the dipper size equals the number of servings per quart.
   b. The number of the dipper size equals the number of servings per pint.
   c. The number of the dipper size equals the number of ounces per serving.

_____4. If you wanted twelve servings per quart, what size dipper would you use?
   a. #6
   b. #12
   c. #24

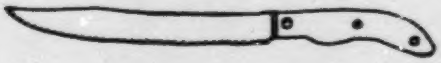
Write in the blank provided the letter of the piece of equipment that should be used for each of the tasks listed in Items 5 through 10.

TASK

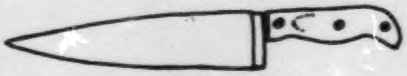
_____5. Slicing a pound cake
_____6. Coring lettuce
_____7. Slicing ham
_____8. Paring apples
_____9. Chopping celery
____10. Cutting sandwiches

EQUIPMENT

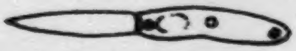
A.



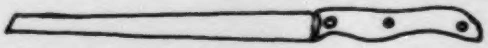
B.



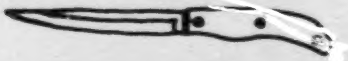
C.



D.



E.

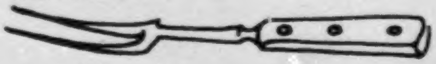


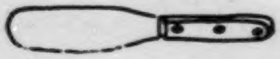
If you were assigned the following tasks, what piece of equipment would you use? Write in the blank provided the letter of the piece of equipment to be used.

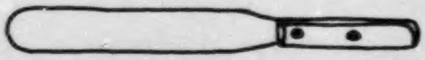
TASK

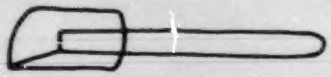
____11. Scraping mixing bowls
____12. Stirring white sauce
____13. Leveling measurements
____14. Turning a roast
____15. Spreading ham salad sandwiches

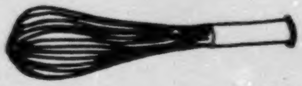
EQUIPMENT

A.


B.


C.


D.


E.


For Items 16 through 19, write in the blank provided the letter of the process which should be used to measure each ingredient. Some processes may be used more than once.

INGREDIENT

____16. Confectioners' sugar
____17. Flour
____18. Vinegar
____19. Shortening

PROCESS

a. Sift and spoon gently into cup
b. Pack firmly into cup
c. Read measurement at eye level

____20. The most accurate method of measuring one cup of milk would be to use a
a. one cup, nested measuring cup.
b. glass measuring cup with a rim.
c. metal measuring cup with a rim.

____21. In quantity food preparation, it is recommended that ingredients
a. always be weighed because it is faster.
b. always be measured because it is more accurate.
c. be weighed when the amounts in the recipe are expressed in ounces or pounds.

____22 The blade of the can opener should be wiped with a damp cloth
a. once each day.
b. after each operation.
c. twice each week.

____23. When operating a can opener, a person should not
a. wipe off the top of the can with a damp cloth.
b. inspect the blade for nicks and grooves.
c. wipe off the base of the can opener with a dry cloth.

UNIT VI TEST

LARGE EQUIPMENT FOR FOOD PREPARATION AND SERVICE

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. Garbage should be fed into a garbage disposal
   a. all at once before the water is turned on.
   b. gradually after the water is turned on.
   c. rapidly after the water is turned on.

_____2. After the grinding has stopped, the garbage disposal should be
   a. turned off immediately.
   b. run for 1 to 2 minutes longer.
   c. run for at least 5 minutes longer.

_____3. For effective dishwashing, dishwashing machines require basic steps of
   a. scraping, pre-washing, and racking.
   b. washing, rinsing, and sanitizing.
   c. both a and b.

_____4. To insure maximum use of the refrigerator, containers should be stored
   a. as close together as possible.
   b. close to the cooling coils.
   c. so air can circulate around them.

_____5. The refrigerator should be defrosted when the frost is
   a. 1/8-inch thick on the coils.
   b. 1/4-inch thick on the coils.
   c. 1/2-inch thick on the coils.

_____6. The bag or cloth filters used in coffee urns should be
   a. rinsed in a strong bleach after using.
   b. stored in a container of fresh cold water.
   c. replaced when they become stained.

_____7. What temperature water should be used to fill both coffee urns and vacuum coffee makers?
   a. Cold.
   b. Lukewarm.
   c. Hot.

_____8. Vacuum coffee makers should be cleaned
   a. twice a week by soaking all parts in a cleansing agent.
   b. after each use with an abrasive cleaner and a brush.
   c. once a week with bleach and hot water.

____9. When making coffee with a vacuum coffee maker,
   a. the water in the lower bowl should be boiling when the top is placed in the lower bowl.
   b. the filter should be removed when the water has been in contact with the coffee for the correct length of time.
   c. the upper bowl should be left in place after the coffee has returned to the lower bowl.

____10. To remove mineral deposits, delime the tea urn
   a. after each use.
   b. once a week.
   c. daily.

____11. Which of the following steps for operating a food slicer is the first step?
   a. Start the motor.
   b. Adjust the indicator.
   c. Slice the food.

____12. When operating a food slicer, one should
   a. remove the blade guard before starting the machine.
   b. use a metal instrument to scrape off food particles.
   c. use warm water when cleaning the slicer.

____13. Food should be added to the food chopper
   a. all at once until the bowl is 1/2 full.
   b. in two additions until the bowl is 3/4 full.
   c. gradually until the bowl is 2/3 full.

____14. To insure cutting food into uniform pieces in a food chopper,
   a. pre-cut food into pieces of the same size.
   b. scrape food down from the outer edge toward bottom of bowl.
   c. remove center portion of food as soon as it is chopped.

____15. Food should be guided into the cutters of a food chopper with
   a. a spoon in the opposite direction that the bowl is turning.
   b. a pusher in the same direction that the bowl is turning.
   c. your hands in either direction.

____16. Food should be removed from the chopper
   a. immediately after the "Stop" button is pushed.
   b. 2 to 3 minutes after pushing the "Stop" button.
   c. after pushing the "Stop" button and removing the blades.

____17. How full should a vegetable peeler be to operate efficiently?
   a. 1/3 full.
   b. 1/2 full.
   c. 2/3 full.

____18. Overloading or underloading the vegetable peeler
   a. reduces the efficiency of the operation.
   b. damages the vegetable peeler.
   c. bruises the vegetables.

____19. The speed of the mixer is controlled by the
a. gear control.
b. off and on switch.
c. wall socket.

____20. When changing the speed of a gear-driven electric mixer,
a. the clutch lever should be put into neutral before changing speeds.
b. the machine should be turned off before changing speeds.
c. simply move the gear to the desired speed.

____21. For best results, the mixer bowl should be filled
a. 1/4 to 1/2 full.
b. 1/2 to 2/3 full.
c. 2/3 to 3/4 full.

____22. As a safety precaution during the mixing process, what should be done before using a spatula to scrape the sides of the mixer bowl?
a. Reduce the speed of the mixer and lower the bowl.
b. Lower the bowl and tip the bowl forward.
c. Stop the mixer and lower the bowl.

____23. What temperatures should the water be for rinsing egg mixtures or flour batters from the beaters?
a. Lukewarm.
b. Cold.
c. Hot.

____24. Food should be forced through the vegetable hopper by using
a. the cover.
b. the fingers.
c. a pusher.

____25. Which of the following is not true when using a blender?
a. Disconnect the cord when the blender is not in use.
b. Be sure the lid of the blender is fastened tightly.
c. Place very coarse foods and large pieces of ice in the blender.

____26. Water in the steam table tank should be kept at a temperature which will hold the food at a minimum of
a. 120° F. (48° C.).
b. 140° F. (60° C.).
c. 160° F. (72° C.).

____27. In order to prevent bacterial growth, the steam table should be cleaned
a. immediately after the service is completed.
b. at the end of the day.
c. twice a week.

____28. Which of the following statements is not true about the steam table?
    a. The steam table helps prevent growth of bacteria.
    b. If the water reaches too high a temperature, the food is likely to become overcooked.
    c. When containers are placed in the steam table, they should not be covered.

____29. The primary purpose of the bain-marie is to
    a. keep food hot at the service counter.
    b. cook food to be served at the service counter.
    c. complete the cooking process of foods to be served at the service counter.

____30. Which of these statements about the use of the bain-marie is correct?
    a. The steam switch should be turned on 15 to 20 minutes before adding the water.
    b. Water should be drained from the bain-marie at the end of each day.
    c. The water level should be such that the food containers do not float.

____31. The cold food server should be cleaned
    a. daily.
    b. twice a week.
    c. weekly.

____32. The cold food server is used to
    a. chill foods as they are prepared.
    b. keep cold foods chilled during serving.
    c. store leftover food.

UNIT VII TEST

LARGE EQUIPMENT FOR COOKING FOOD

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. Which of the following is not true when cleaning a toaster?
a. The cleaning compound or water should not touch the electrical element.
b. The toaster should be disconnected before it is cleaned.
c. The outside of toasters should be wiped off with an oil-treated cloth.

_____2. A conveyor toaster should be
a. plugged in when not in use.
b. loaded without touching the elements with your fingers.
c. cleaned once a week.

_____3. The "High" setting on electric and gas ranges should be used
a. only until the food starts to cook.
b. until the food is almost cooked.
c. during the entire cooking time.

_____4. On gas ranges without pilots, you should light the match
a. after turning on the burner valve.
b. before turning on the burner valve.
c. before turning the thermostat as high as possible.

_____5. Seasoning the surface of a grill requires
a. the use of pumice stone to remove grease and food particles.
b. the build-up of shortening on a grill until a slick surface is formed.
c. the addition of salt, pepper, and spices to food on the grill.

_____6. Which of the following practices would be recommended when deep-frying foods?
a. Fill the fry basket full to increase production.
b. Place breaded foods close together to save space.
c. Drain excess moisture from foods that have been soaked in water before frying.

_____7. After fat has been used for deep-frying, it should be
a. strained.
b. discarded.
c. refrigerated.

_____8. Which of the following is not true when operating an oven?
a. The oven preheats faster when it is set at a higher temperature.
b. Avoid excessive opening of oven door to prevent the loss of heat.
c. Allow the oven to preheat before placing food in the oven.

_____9. Which of these steps should be performed first in the operation of a compartment steamer?
   a. Turn on the controls or switch.
   b. Pull the steam valves for each compartment.
   c. Close and lock the door.

____10. Which of the following is not a safety practice when using steaming equipment?
   a. Lift the kettle lid away from you.
   b. Turn off the steamer and call a service organization if the steam pressure rises above the safety level.
   c. Add water immediately to the jacket of the kettle when it goes dry.

UNIT VIII TEST

TECHNIQUES OF FOOD PREPARATION

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. Standard recipes are recommended for use in food service primarily because they
- a. insure that the product is the same each time.
- b. reduce the cost of the product.
- c. require less time to prepare.

_____2. Which of the following types of information is not included in a standard recipe?
- a. Length of cooking time.
- b. Substitutions for ingredients not available.
- c. Number of servings.

Speed and accuracy are important factors in food preparation. Which of the following would help one to develop speed and accuracy?

If your answer is yes, write a in the blank provided.
If your answer is no, write b in the blank provided.

_____3. Read the recipe carefully before beginning.

_____4. Wait to measure ingredients until they are called for in the recipe.

_____5. Estimate the time required for preparation and cooking.

_____6. Check to see that all necessary equipment is available.

_____7. Which of the following is incorrect?
- a. 3 t. = 1 T.
- b. 32 T. = 1 pt.
- c. f.g. = 1/8 t.

_____8. Which one of the substitutions listed below is correct?
- a. 1 whole egg = 3 egg yolks
- b. 1 c. sour milk = 1 c. fresh milk plus 1 T. vinegar or lemon juice
- c. 1 sq. chocolate = 3 T. cocoa

_____9. Betty was assigned to triple a recipe. She used the largest equivalent measures for the ingredients. Which of the following is an incorrect measure?
- a. She used 1 1/4 lbs. of sugar--the recipe called for 8 ozs.
- b. She used 1 T. and 1 1/2 t. of baking powder--the recipe called for 1 1/2 t.
- c. She used 1 pt. of liquid--the recipe called for 2/3 c.

In Items 10 through 13, write in the blank provided the letter of the definition which correctly defines each term.

TERM	DEFINITION
____10. Dice	a. To pulverize
____11. Mince	b. To cut into match-stick strips
____12. Julienne	c. To form tiny flakes
____13. Grate	d. To cut into cubes
	e. To cut into very small pieces

In Items 14 through 17, write in the blank provided the letter of the definition which correctly defines each term.

TERM	DEFINITION
____14. Scald	a. To cook with steam
____15. Simmer	b. To dip into boiling water for a specified time
____16. Blanch	c. To boil until partially cooked
____17. Steam	d. To heat to a temperature of about 185° F. (85° C.)--bubbles break below surface
	e. To heat to a temperature just below boiling

In Items 18 through 21, write in the blank provided the letter of the method of pre-portioning which could be used with each of the foods listed.

FOOD	METHOD OF PRE-PORTIONING
____18. Chocolate cake	a. Standard size pan
____19. Baked custard	b. Standard scoop or dipper
____20. Mashed potatoes	c. Individual baking dish
____21. Cheese	d. Individual carton
	e. Standard slicer

____22. Establishing the size of a portion of food to be served does not
   a. prevent underproduction or overproduction of the food to be served.
   b. enable all food establishments to serve the same size of portions.
   c. assure the guests' that the same amount of food is served each time an order is filled.

____23. Which of the following is not a reason for portioning foods?
   a. To provide leftovers which can be served later.
   b. To provide uniform servings of food.
   c. To provide for production of the appropriate amount of food.

____24. The quality of convenience foods
   a. is usually consistent.
   b. varies from one time to the next.
   c. is inferior to items prepared from "scratch."

____25. The higher cost of convenience foods is balanced by cost reductions in all but one of the following. Which one does not help to balance this cost?
   a. The amount of food needed.
   b. The amount of labor needed.
   c. The amount of equipment needed.

____26. When Jill's employer told her that they were going to use work simplification techniques, he meant that they would need to
   a. work faster to complete the job.
   b. do the simplest part of the job first.
   c. find the easiest way to do the job.

____27. Which of the following is not a step in work simplification?
   a. Analyze the job; observe how it is done.
   b. Analyze the worker's attitude.
   c. Plan the job, avoiding unnecessary waste.

In Items 28 through 31, match the food service task with the rule for motion economy that could be applied when performing the task. Write the letter of the rule in the blank beside the task.

FOOD SERVICE TASK

____28. Filling soup bowls
____29. Cleaning top of the range
____30. Breading pork chops (dipping in flour, eggs, and then crackers)
____[illegible]. Placing chopped celery in container

MOTION ECONOMY RULE

a. Use curved motions with natural rhythm.
b. Work hands in unison.
c. Promote proper motion sequence by good location of tools and materials.
d. Free hands and fingers by using devices, tools, or equipment.
e. Use gravity to do work whenever possible.

For Questions 32 through 35, write in the blank provided:

a if the statement is a rule of motion economy.
b if the statement is not a rule of motion economy.

____32. Provide comfortable working heights.

____33. Use music to cover up noise.

____34. Allow rest periods.

____35. Place equipment so levers and controls are in out-of-the-way positions to eliminate safety hazards.

UNIT IX TEST

COLD FOOD WORK STATION

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. Coffee that is allowed to stand for a long period of time or is reheated before serving will
   a. acquire a bitter taste.
   b. have a richer flavor.
   c. have no change in flavor.

_____2. To prepare coffee in a coffee urn, boiling water should be poured over the grounds with a
   a. quick, up and down motion.
   b. slow, back and forth motion.
   c. steady, circular motion.

_____3. Coffee should be held at a serving temperature of
   a. 145° F. (63° C.).
   b. 165° F. (74° C.).
   c. 185° F. (85° C.).

_____4. Boiling tea causes it to become
   a. clear.
   b. strong and bitter.
   c. mild in flavor.

_____5. Which of the following is not a characteristic of a quality chocolate beverage?
   a. Well-blended with no sediment.
   b. Consistency similar to coffee or tea.
   c. A rich chocolate flavor.

_____6. The discoloration of apples and bananas during salad preparation will not be prevented by dipping pieces in
   a. lemon juice.
   b. vinegar and water.
   c. sugar and water.

_____7. Color, flavor, and texture are added to a salad by the
   a. dressing.
   b. garnish.
   c. body.

_____8. One of the first considerations in salad preparation is
   a. to clean the ingredients thoroughly.
   b. to choose the appropriate dressing.
   c. to select the correct serving dish.

_____9. Fruits and vegetables are more likely to be evenly distributed in gelatin salads if they are added
a. as soon as the gelatin has cooled to room temperature.
b. as the gelatin is being prepared.
c. when the gelatin becomes the consistency of egg whites.

____10. When assembling salads, you need to remember to
a. place ingredients in an orderly arrangement.
b. use ingredients whole or in large pieces.
c. arrange lettuce leaves so they extend to the edge of the plate.

____11. A type of dressing which must be shaken before it is added to a salad is
a. cooked
b. mayonnaise
c. French

____12. Salad greens may be freshened by placing greens in
a. the freezer for 25 minutes.
b. the refrigerator in a plastic bag with some ice for a short period of time.
c. tap water for 2 hours.

____13. To prevent the sandwich filling from soaking into the bread, spread the bread with
a. melted butter or margarine.
b. softened butter or margarine.
c. butter or margarine thinned with milk.

____14. A recommended motion to use when spreading fillings on sandwiches is
a. two-stroke technique.
b. one-stroke technique.
c. circular technique.

____15. The proper procedure for refrigerating a tray of unwrapped sandwiches is to
a. cover the tray of sandwiches with moisture-proof wrap paper.
b. stack the uncovered sandwiches three-deep on the tray.
c. place the uncovered tray of sandwiches in the refrigerator immediately after preparation.

____16. Condiments are
a. sauces or accompaniments for food.
b. candy decorations used on foods.
c. elaborate desserts.

____17. Decorations used on foods to make them more attractive are called
a. dressings.
b. condiments.
c. garnishes.

____18. Garnishes for foods should

a. provide a contrast in color and texture.
b. be placed at random.
c. be very similar in color to the food.

UNIT X TEST

HOT FOOD WORK STATION

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. Eggs cooked at a high temperature are
   a. firm and tender.
   b. hard and tough.
   c. soft and tender.

_____2. Eggs function as an emulsifying agent in
   a. mayonnaise.
   b. custards.
   c. soufflés.

_____3. Egg yolks and egg whites are beaten separately and then combined when preparing a
   a. French omelet.
   b. meringue.
   c. fluffy omelet.

_____4. Which of the following is not a technique to use when beating egg whites?
   a. Have the eggs at room temperature.
   b. Use a bowl with a small bottom and sloping sides.
   c. Add a small amount of egg yolk to the egg whites before beating.

_____5. The most concentrated and inexpensive form of milk is
   a. dried.
   b. condensed.
   c. homogenized.

_____6. When preparing milk and cheese dishes one should use
   a. low temperatures and a long cooking period.
   b. moderate temperatures and a short cooking period.
   c. high temperatures and a short cooking period.

_____7. Cheese that is melted at a high temperature becomes
   a. tough and stringy.
   b. smooth and creamy.
   c. sharper in flavor.

_____8. Vegetables with high-moisture content should be cooked
   a. until soft in texture.
   b. until they come to a boil.
   c. only until tender.

____9. An eximple of a high-moisture, mild-flavored vegetable is
a. green peas.
b. cabbage.
c. potatoes.

____10. Which of these practices would not cause loss of nutrients when preparing vegetables?
a. Soaking vegetables to clean them.
b. Cooking in a small amount of water.
c. Deep peeling of vegetables.

____11. When vegetables are cooked, the water or liquid to which they are added should be
a. cold.
b. warm.
c. boiling.

____12. A well-cooked cereal
a. is tender and free from lumps.
b. has a slightly starchy flavor.
c. has a thick pasty texture.

____13. Pasta products should be cooked to the "al dente" stage which means
a. the product is very tender.
b. there is some resistance when the product is chewed.
c. the product has swelled and enlarged.

____14. Pasta products include all the following except
a. rice.
b. spaghetti.
c. noodles.

____15. A pasta is
a. a refined grain product.
b. an edible grass.
c. a food made from a flour paste.

____16. Clarifying agents for soup stock are
a. cornstarch or flour.
b. lean ground meat.
c. slightly beaten egg white and egg shell.

____17. To keep acid vegetables from curdling a cream soup add
a. baking soda to the vegetables before adding them to the cream sauce.
b. the vegetables to the cream sauce very slowly, just before serving.
c. the vegetables to the flour paste when making the cream sauce.

____18. When preparing a white sauce, if lumps form in the sauce,
a. stir in more milk.
b. remove the sauce from the heat and beat until smooth.
c. cover the pan and lower the heat.

____19. Dessert sauces are made from
a. a custard or sugar syrup base.
b. a sweetened white sauce.
c. fruit juices thickened with flour.

____20. The general category of sauces includes all the following except
a. gravies and marinades.
b. salad dressings and mayonnaise.
c. consommé.

____21. Meat is more tender and juicy when it is cooked at
a. low temperatures.
b. medium temperatures.
c. high temperatures.

____22. The most important factor to consider when choosing the method of meat cookery to use is the
a. amount of fat in the piece of meat.
b. size of the piece of meat.
c. degree of tenderness of the meat.

____23. The most efficient way to determine when a large cut of meat is done is to
a. make a cut in the center of the meat to check for doneness.
b. use a meat thermometer.
c. use a timetable for length of cooking time in relation to weight of meat.

____24. An older, less tender type of poultry can be successfully prepared by
a. stewing.
b. broiling.
c. frying.

____25. Fish is completely cooked when
a. the moisture is completely cooked out of it.
b. it reaches an internal temperature of 185° F. (85° C.).
c. it flakes easily and is an opaque white color.

In Questions 26 through 31, write in the blank provided the letter of the cookery method which matches the definition.

DEFINITION

_____26. To cook uncovered in a small amount of fat

_____27. To cook by direct heat or flame on a grill or over live coals.

_____28. To cook uncovered in an oven

_____29. To brown meats and then cook slowly in a covered utensil in a small amount of liquid

_____30. To cook in enough fat to cover the food

_____31. To simmer in a covered pan in enough liquid to cover the food

COOKERY METHOD

a. Boil
b. Braise
c. Broil
d. Deep-fat fry
e. Grill
f. Pan-fry
g. Roast
h. Steam
i. Stew

UNIT XI TEST

BAKE WORK STATION

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. To prevent the formation of lumps in starch puddings
   a. alternately add the liquid and starch ingredients to the mixture.
   b. heat the liquid ingredients before adding the starch.
   c. mix the starch with the sugar before adding the liquid ingredients.

_____2. The cut surfaces of fruits such as apples or bananas can be kept from darkening by covering them with
   a. citrus juice.
   b. water.
   c. a sugar-water solution.

_____3. A rich, heavy, frozen dessert whose main ingredient is whipped cream is
   a. a mousse.
   b. ice cream.
   c. a frappé.

_____4. Fried desserts, such as fritters, are not usually produced in food service businesses because they
   a. are not a popular dessert.
   b. require a large amount of preparation time.
   c. require special preparation equipment.

_____5. Food service businesses frequently serve pudding as desserts because
   a. they provide a contrast to bland main dishes.
   b. they are a good source of vitamins.
   c. of the low cost for ingredients and labor to prepare them.

_____6. A standard mousse has a
   a. mild, bland flavor.
   b. spongy, light texture.
   c. firm, heavy texture.

_____7. The type of flour which produces the best yeast bread products is
   a. cake flour.
   b. pastry flour.
   c. all-purpose flour.

_____8. The mixing method which is quick but which produces a coarse-grained cake is the
   a. one-bowl method.
   b. muffin method.
   c. sponge method.

____9. Cake pans used for sponge or foam cakes should be prepared by
a. washing and drying to remove all traces of fat or oil.
b. lining the bottom with waxed paper.
c. greasing and flouring the sides and bottom.

____10. When preparing a cake by the conventional sponge method, you add the dry ingredients to the egg whites
a. alternately with the liquid ingredients.
b. by careful folding to retain air in the mixture.
c. in three additions, beating vigorously after each addition.

____11. If cookies do not brown easily during baking,
a. increase the oven temperature 15°.
b. move the cookie sheet to a higher oven rack.
c. add more sugar to the cookie dough.

____12. Molded cookies are formed by
a. flattening a ball of dough with a fork.
b. cutting various shapes out of rolled dough.
c. forcing cookie dough through a cookie press.

____13. Cookie doughs differ from cake batters because they contain more
a. leavening agent.
b. liquid ingredients.
c. eggs and fat.

____14. A mealy, tender crust is produced by using the
a. paste method.
b. hot water method.
c. conventional method.

____15. When rolling out pie crust, you should roll the dough from
a. the edges to the center.
b. one edge to the opposite edge.
c. the center to the edges.

____16. Pie crust is usually rolled to a thickness of
a. 1/8 inch.
b. 1/4 inch.
c. 1/2 inch.

____17. One way to help prevent the bottom crust of a single crust pie from becoming soggy is to
a. chill the pie before serving.
b. add the filling just prior to serving.
c. use additional cornstarch in the filling to make it thicker.

____18. The characteristics of a standard meringue topping include
a. a golden color and a texture that cuts smoothly.
b. a white color with tiny golden drops covering the surface.
c. a golden appearance with the meringue slightly separated from the edges of the pie crust.

____19. The method you would choose to prepare individual loaves of yeast bread if you wanted the fastest method, but the one that also produces the best quality product, is the
a. sponge method.
b. no-knead method.
c. straight-dough method.

____20. The characteristics of high quality muffins include a
a. pebbly golden brown crust.
b. moist interior with some tunnels.
c. smooth crust with even color.

____21. When preparing quick bread products, the ingredients should be
a. beaten vigorously until very smooth.
b. stirred quickly and only enough to blend.
c. beaten until the batter forms soft peaks.

____22. A well-prepared pancake should have
a. a slightly moist, sticky texture.
b. a fine-celled grain with some tunnels.
c. a delicately pitted surface.

____23. To prevent a quick bread batter from curdling when a recipe directs you to add the wet and dry ingredients alternately, add the
a. dry ingredients first and last.
b. wet ingredients first and last.
c. dry ingredients first and the wet ingredients last.

____24. Overstirring muffins causes the baked product to be
a. moist.
b. tough.
c. dry.

____25. Biscuits that are heavy and compact may be the result of
a. too much shortening.
b. too little liquid.
c. too much kneading.

____26. The characteristics of a standard biscuit include a
a. flaky, tender, slightly moist texture.
b. creamy white interior with brown spots scattered throughout.
c. uniform size about 1 1/2 times the size of the unbaked biscuits.

____27. Yeast bread products are fully proofed when
a. small dents made in the dough slowly fill out.
b. small dents made in the dough remain in the dough.
c. the dough has a smooth, shiny, puffy appearance.

____28. Air is incorporated into a product by
a. sifting the sugar.
b. adding egg yolks to the batter.
c. beating the batter.

____29. The characteristics of yeast bread include a
- a. typical yeast flavor.
- b. tender crisp crust with a typical crack down the center of the loaf.
- c. soft, moist, springy texture.

____30. Preparation of yeast bread products by the straight-dough method involves ten steps. Which series of five steps listed below is in the correct order?
- a. mixing, fermenting, kneading, baking, panning
- b. mixing, kneading, fermenting, proofing, baking
- c. proofing, mixing, kneading, panning, baking

In Questions 31 through 35, match the ingredient with the function it performs in baked products.

FUNCTION

____31. Acts as a tenderizing agent
____32. Increases the volume of the product
____33. Furnishes food for the growth of yeast
____34. Forms the framework of baked products
____35. Controls the fermentation of yeast

INGREDIENT

a. Flavorings
b. Flour
c. Leavening agent
d. Liquids
e. Salt
f. Shortening
g. Sugar

UNIT XII TEST

CUSTOMER SERVICE TECHNIQUES

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. When American-type service is used,
   a. the plates are served in the kitchen.
   b. the food is served from a special cart.
   c. the waiter serves the food at the table.

_____2. American-type service
   a. is more expensive than other types of service.
   b. requires a minimum number of waiters or waitresses.
   c. takes more training than other types of service.

_____3. The customer's order should be taken
   a. five minutes after the customer is seated.
   b. as soon as the customer is seated.
   c. when the customer puts the menu down.

_____4. A waitress should
   a. take the order from the customer's right.
   b. not ask too many questions when taking orders.
   c. suggest and help the guest with menu choices in a friendly manner.

_____5. The most accepted and logical method for serving the dinner plate is to serve from the customer's
   a. left with the left hand.
   b. right with the right hand.
   c. right with the left hand.

_____6. Beverages should be served and removed from the customer's
   a. right or left (either is all right).
   b. left.
   c. right.

_____7. When a customer is serving himself, the serving dish should be offered to his
   a. left.
   b. right.
   c. left or right (either is all right).

_____8. One of the most important traits one can possess in the food service industry is
   a. self-confidence.
   b. courtesy.
   c. efficiency.

____9. When the salad is served as a separate course, it is placed
- a. to the customer's left.
- b. to the customer's right.
- c. in the center of the cover.

____10. The check should be presented to the customer when
- a. the dessert is served.
- b. he has finished his dessert.
- c. he asks for it.

____11. Which table arrangement for parties should be avoided when possible?
- a. The U-shape.
- b. The long table.
- c. Hollow squares.

____12. Which of the following is not true about cafeteria style service?
- a. Foods should be arranged in a neat, orderly manner.
- b. The color of the food should be considered when putting it in place on the cafeteria line.
- c. Food spills should be cleaned up when serving is completed.

____13. Which of these factors would most likely discourage customers from returning to a food service establishment?
- a. Unsanitary conditions.
- b. Slow service.
- c. Lack of atmosphere.

Where are the items listed in Questions 14 through 18 generally placed when setting a table for dinner?

Write a in the blank provided if the item is usually on the left.
Write b in the blank provided if the item is usually on the right.

____14. Teaspoon
____15. Salad plate
____16. Water glass
____17. Knife
____18. Dinner fork

For Items 19 through 22, in the blank provided write

a if the statement is true.
b if the statement is false.

____19. When complaints are heard about the food, they should be reported to the cook.
____20. The quality of the bus service has little effect on the overall operation of a food service establishment.
____21. When clearing tables, the busboy or busgirl should not stack the glasses inside one another.
____22. Clearing tables quietly is as important as clearing them rapidly.

UNIT XIII TEST

PROCEDURES FOR STOREROOM CONTROL

Select the letter of the phrase which correctly completes the statement. Place the letter in the blank next to the statement. Choose only one answer for each item.

_____1. The person who is usually responsible for checking to see that the correct quantity of goods has been delivered is the
- a. manager.
- b. cook's helper.
- c. receiving clerk.

_____2. Receiving records must contain all of the following except
- a. date of the order.
- b. quantities or weights received.
- c. price of items delivered.

_____3. When poor quality or an incorrect quantity of goods is delivered, the receiving clerk should
- a. contact the company delivering the order.
- b. report it to the manager.
- c. check with the person in charge of the receiving area.

_____4. When the usual method of receiving foods and supplies is used, the receiving clerk
- a. receives duplicate purchase orders listing the goods ordered.
- b. has not been notified of the orders to be received.
- c. makes out the orders for goods to be received.

_____5. One purpose of taking inventory is to
- a. aid in determining food costs.
- b. be sure to have extra food on hand.
- c. check the quality of goods on hand.

_____6. Which of the following is not true about storing foods?
- a. Place new stock in front of the old stock.
- b. Space foods in walk-in refrigerator to allow for air circulation.
- c. Cross-stack cartons of eggs.

_____7. A storeroom worker should not fill a requisition if it
- a. includes items from more than two different storage areas.
- b. is not signed by the department head.
- c. requests more than six items.

_____8. Temperatures to keep foods solidly frozen for deep freezers must be between
- a. 0° to 30° F. (-18° to -1° C.).
- b. -10° to 32° F. (-23° to 0° C.).
- c. 30° to 32° F. (-1° to 0° C.).

ANSWER KEYS
FOR
UNIT TESTS

ANSWER KEYS
FOR
FOOD SERVICE EMPLOYEE

UNIT I

1. C
2. B
3. C
4. A
5. B
6. B
7. A

UNIT II

1. B
2. C
3. A
4. C
5. B
6. A
7. B
8. C
9. A
10. C
11. A
12. B
13. C
14. B
15. C
16. B
17. C
18. B
19. B
20. A
21. B
22. A
23. A
24. B
25. B

UNIT III

1. B
2. A
3. A
4. B
5. B
6. A
7. B
8. B,D,E,F
9. C
10. A,B,C
11. E,F
12. C
13. B,D,E,F
14. C, D

UNIT IV

1. B
2. C
3. B
4. C
5. A
6. B
7. A
8. C
9. B
10. B
11. B
12. B
13. C
14. A
15. B
16. C
17. B
18. A
19. C
20. B

ANSWER KEYS
FOR
FOOD SERVICE EMPLOYEE

UNIT V

1. A
2. C
3. A
4. B
5. A
6. E
7. D
8. C
9. B
10. D
11. D
12. E
13. C
14. A
15. B
16. A
17. A
18. C
19. B
20. B
21. C
22. B
23. C

UNIT VI

1. B
2. C
3. C
4. C
5. B
6. B
7. A
8. A
9. A
10. B
11. B
12. C
13. C
14. B
15. A
16. B
17. C
18. A
19. A
20. A
21. B
22. C
23. B
24. A
25. C
26. B
27. A
28. C
29. A
30. C
31. A
32. B

UNIT VII

1. C
2. B
3. A
4. B
5. B
6. C
7. A
8. A
9. C
10. C

ANSWER KEYS
FOR
FOOD SERVICE EMPLOYEE

UNIT VIII		UNIT IX	UNIT X	
1. A	21. E	1. A	1. B	21. A
2. B	22. B	2. C	2. A	22. C
3. A	23. A	3. C	3. C	23. B
4. B	24. A	4. B	4. C	24. A
5. A	25. A	5. B	5. A	25. C
6. A	26. C	6. B	6. B	26. F
7. C	27. B	7. B	7. A	27. C
8. B	28. B	8. A	8. C	28. G
9. A	29. A	9. C	9. A	29. B
10. D	30. C	10. A	10. B	30. D
11. E	31. E	11. C	11. C	31. I
12. B	32. A	12. B	12. A	
13. C	33. B	13. B	13. B	
14. E	34. A	14. A	14. A	
15. D	35. B	15. A	15. C	
16. B		16. A	16. C	
17. A		17. C	17. B	
18. A		18. A	18. B	
19. C			19. A	
20. B			20. C	

ANSWER KEYS
FOR
FOOD SERVICE EMPLOYEE

UNIT XI

1.	C	21.	B
2.	A	22.	C
3.	A	23.	A
4.	B	24.	B
5.	C	25.	C
6.	B	26.	A
7.	C	27.	A
8.	B	28.	C
9.	A	29.	C
10.	B	30.	B
11.	B	31.	F
12.	A	32.	C
13.	C	33.	G
14.	B	34.	B
15.	C	35.	E
16.	A		
17.	B		
18.	A		
19.	C		
20.	A		

UNIT XII

1.	A	21.	A
2.	B	22.	A
3.	C		
4.	C		
5.	A		
6.	C		
7.	A		
8.	B		
9.	C		
10.	B		
11.	B		
12.	C		
13.	A		
14.	B		
15.	A		
16.	B		
17.	B		
18.	A		
19.	B		
20.	B		

UNIT XIII

1.	C
2.	C
3.	C
4.	A
5.	A
6.	A
7.	B
8.	B

REFERENCES REQUIRED
FOR
INSTRUCTIONAL MATERIALS

REFERENCES REQUIRED FOR USE WITH INSTRUCTIONAL MATERIALS

BOOKS

* Cornelius, Ethelwyn G. Food Service Careers. Peoria, Illinois: Chas. A Bennett Co., Inc., 1974.

+ * Lewis, Dora S.; Peckham, Gladys C.; and Hovey, Helen S. Family Meals and Hospitality. New York, New York: Macmillan Publishing Co., Inc., 1972.

* Required reference
+ State adopted textbook